

Adventures on the
Roof of the World

by

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THE FINDING OF THE LAST BIVOUAC OF MESSRS. DONKIN AND FOX IN THE CAUCASUS. (P. 116.)
From a drawing by Mr. Willink after a sketch by Captain Powell. Taken, by kind permission of Mr. Douglas Freshfield, from "The Exploration of the Caucasus."

ADVENTURES ON THE ROOF OF THE WORLD

BY

MRS AUBREY LE BLOND

(MRS MAIN)

AUTHOR OF

"MY HOME IN THE ALPS," "TRUE TALES OF MOUNTAIN ADVENTURE," ETC.

ILLUSTRATED



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1904

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TO
JOSEPH IMBODEN

MY GUIDE AND FRIEND FOR TWENTY YEARS,

I dedicate

THESE RECORDS OF A PASTIME IN WHICH I OWE

MY SHARE TO HIS SKILL, COURAGE, AND

HELPFUL COMPANIONSHIP.

P R E F A C E

“**D**EAR HEART,” said Tommy, when Mr Barlow had finished his narrative, “what a number of accidents people are subject to in this world!”

“It is very true,” answered Mr Barlow, “but as that is the case, it is necessary to improve ourselves in every possible manner, so that we may be able to struggle against them.”

Thus quoted, from *Sandford and Merton*, a president of the Alpine Club. The following True Tales from the Hills, if they serve to emphasise not only the perils of mountaineering but the means by which they can be lessened, will have accomplished the aim of their editor.

This book is not intended for the climber. To him most of the tales will be familiar in

PREFACE

the volumes on the shelves of his library or on the lips of his companions during restful hours in the Alps. But the non-climber rarely sees *The Alpine Journal* and the less popular books on mountaineering, nor would he probably care to search in their pages for narratives likely to interest him.

To seek out tales of adventure easily intelligible to the non-climber, to edit them in popular form, to point out the lessons which most adventures can teach to those who may climb themselves one day, has occupied many pleasant hours, rendered doubly so by the feeling that I shall again come into touch with the readers who gave so kindly a greeting to my *True Tales of Mountain Adventure*. In that work I tried to explain the principles of mountaineering and something of the nature of glaciers and avalanches. Those chapters will, I think, be found helpful by non-climbers who read the present volume.

For much kindly advice and help in com-

PREFACE

piling this work I am indebted to Mr Henry Mayhew, of the British Museum, and to Mr Clinton Dent. Mrs Maund has enabled me to quote from a striking article by her late husband. Sir W. Martin Conway, Sir H. Seymour King, Messrs Tuckett, G. E. Foster, Cecil Slingsby, Harold Spender, and Edward Fitzgerald have been good enough to allow me to make long extracts from their writings. Messrs Newnes have generously permitted me to quote from articles which appeared in their publications, and the editor of *The Cornhill* has sanctioned my reprinting portions of a paper from his magazine. I am also indebted to the editor of *M'Clure's Magazine* for a similar courtesy.

Mons. A. Campagne, Inspector of Water and Forests (France), allows me to make use of two very interesting photographs from his work on the Valley of Barège. Several friends have lent me photographs for reproduction in this work, and their names appear

PREFACE

under each of the illustrations I owe to them. Messrs Spooner have kindly allowed me to use several by the late Mr W. F. Donkin. When not otherwise stated, the photographs are from my own negatives.

I take this opportunity of heartily thanking those climbers, some of them personally unknown to me, whose assistance has rendered this work possible.

E. LE BLOND.

67 THE DRIVE,
BRIGHTON, *December* 1903.

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CHAPTER I

SOME TALES OF ALPINE GUIDES

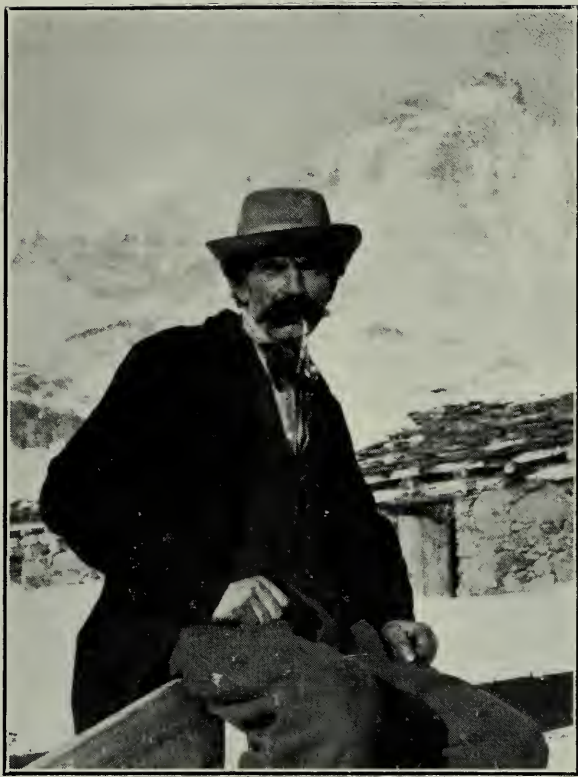
IN a former work, I have given some details of the training of an Alpine guide, so I will not repeat them here.

The mountain guides of Switzerland form a class unlike any other, yet in the high standard of honour and devotion they display towards those in their charge, one is reminded of two bodies of men especially deserving of respect and confidence, namely, the Civil Guards of Spain and the Royal Irish Constabulary. Like these, the Alpine guide oftentimes risks his health, strength—even his life—for persons who are sometimes in themselves the cause of the peril encountered. Like these, mere bodily strength and the best will in the world

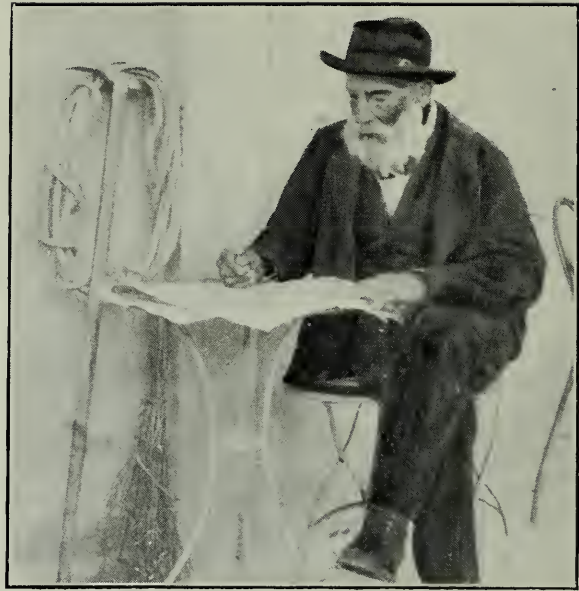
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need to be associated with intelligence and foresight. Like these, also, keen, fully-developed powers of observation are essential. A certain climber of early days has wittily related in *The Alpine Journal* a little anecdote which bears on this point. "Some years ago," writes the late Mr F. Craufurd Grove, "a member of this Club was ascending a small and easy peak in company with a famous Oberland guide. Part of their course lay over a snow-field sinking gradually on one side, sharply ended by a precipice on the other. The two were walking along, not far from the edge of this precipice, when the Englishman, thinking that an easier path might be made by going still nearer the edge, diverged a little from his companion's track. To his considerable surprise, the guide immediately caught hold of him, and pulled him back with a great deal more vigour than ceremony, well-nigh throwing him down in the operation. Wrathful, and not disinclined to return the compliment, the Englishman remonstrated. The guide's only answer was to point to a small crack, apparently like scores of other cracks in the *névé*, which ran for some distance parallel to the edge of the precipice, and about 15 feet from it.

"The traveller was not satisfied, but he was too wise a man to spend time in arguing and disputing, while a desired summit was still some distance



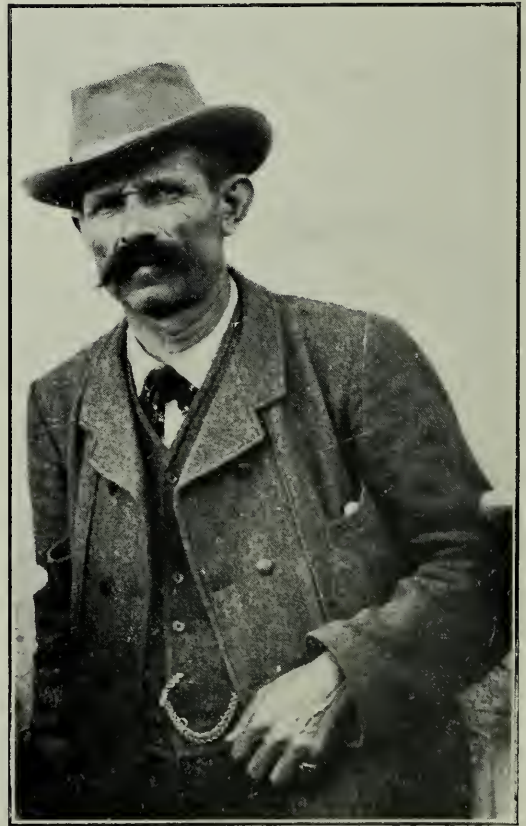
JEAN ANTOINE CARREL OF VALOURNANCHE.
By Signor Vittorio Sella.



CHRISTIAN ALMER OF GRINDELWALD.



ALEXANDER BURGNER OF EISTEN (SAASTHAL).



JOSEPH IMBODEN OF ST. NICHOLAS.

SOME TALES OF ALPINE GUIDES

above him. They went on their way, gained the top, and the traveller's equanimity was restored by a splendid view. When, on the descent, the scene of the morning's incident was reached, the guide pointed to the little crack in the *névé*, which had grown perceptibly wider. 'This marks,' he said, 'the place where the true snow-field ends. I feel certain that the ice from here to the edge is nothing but an unsupported cornice hanging over the tremendous precipice beneath. It might possibly have borne your weight in the early morning, though I don't think it would. As to what it will bear now that a powerful sun has been on it for some time—why, let us see.' Therewith he struck the *névé* on the further side of the ice sharply with his axe. A huge mass, some 20 or 30 feet long, immediately broke away, and went roaring down the cliff in angry avalanche. Whereat the traveller was full of amazement and admiration, and thought how there, on an easy mountain and in smiling weather, he had not been very far from making himself into an avalanche, to his own great discomfort and to the infinite tribulation of the Alpine Club."

A fatal accident was only narrowly averted by the skill of the famous guide Zurbriggen when making an ascent in the New Zealand Alps with Mr Edward Fitzgerald. I am indebted to this

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gentleman for permission to quote the account from his article in *The Alpine Journal*.

The party were making the ascent of Mount Sefton, and were much troubled by the looseness of the rock on the almost vertical face which they had to climb. However, at last they reached a ridge, "along which," writes Mr Fitzgerald, "we proceeded between two precipices, descending to the Copland and to the Mueller valleys—some 6000 feet sheer drop on either hand.

"We had next to climb about 300 feet of almost perpendicular cliff. The rocks were peculiarly insecure, and we were obliged to move by turns, wherever possible throwing down such rocks as seemed most dangerous. At times even this resource was denied us, so dangerous was the violent concussion with which these falling masses would shake the ridge to which we clung. I carried both the ice axes, so as to leave Zurbriggen both hands free to test each rock as he slowly worked his way upwards, while I did my utmost to avoid being in a position vertically beneath him.

"Suddenly, as I was coming up a steep bit, while Zurbriggen waited for me a few steps above, a large boulder, which I touched with my right hand, gave way with a crash and fell, striking my chest. I had been just on the point of passing up the two ice axes to Zurbriggen, that he might place them

SOME TALES OF ALPINE GUIDES

in a cleft of rock a little higher up, and thus leave me both hands free for my climb. He was in the act of stooping and stretching out his arms to take them from my uplifted left hand, and the slack rope between us lay coiled at his feet. The falling boulder hurled me down head foremost, and I fell about 8 feet, turning a complete somersault in the air. Suddenly I felt the rope jerk, and I struck against the side of the mountain with great force. I feared I should be stunned and drop the two ice axes, and I knew that on these our lives depended. Without them we should never have succeeded in getting down the glacier, through all the intricate ice-fall.

“After the rope had jerked me up I felt it again slip and give way, and I came down slowly for a couple of yards. I took this to mean that Zurbriggen was being wrenched from his foot-hold, and I was just contemplating how I should feel dashing down the 6000 feet below, and wondering vaguely how many times I should strike the rocks on the way. I saw the block that I had dislodged going down in huge bounds; it struck the side three or four times, and then, taking an enormous plunge of about 2000 feet, embedded itself in the glacier now called the Tuckett Glacier.

“I felt the rope stop and pull me up short. I called to Zurbriggen and asked him if he were solidly placed.

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I was now swinging in the air like a pendulum, with my back to the mountain, scarcely touching the rock face. It would have required a great effort to turn round and grasp the rock, and I was afraid the strain which would thus necessarily be placed on the rope might dislodge Zurbriggen.

"His first fear was that I had been half killed, for he saw the rock fall almost on top of me; but, as a matter of fact, after striking my chest it had glanced off to the right and passed under my right arm; it had started from a point so very near to me that it had not time to gain sufficient impetus to strike me with great force. Zurbriggen's first words were, 'Are you very much hurt?' I answered, 'No,' and again I asked him whether he were firmly placed. 'No,' he replied, 'I am very badly situated here. Turn round as soon as you can; I cannot hold you much longer.' I gave a kick at the rocks with one foot, and with a great effort managed to swing myself round.

"Luckily there was a ledge near me, and so, getting some hand-hold, I was soon able to ease the strain on the rope. A few moments later I struggled a little way up, and at last handed to Zurbriggen the ice axes, which I had managed to keep hold of throughout my fall. In fact, my thoughts had been centred on them during the whole of the time. We were in too bad a place to stop to speak to one



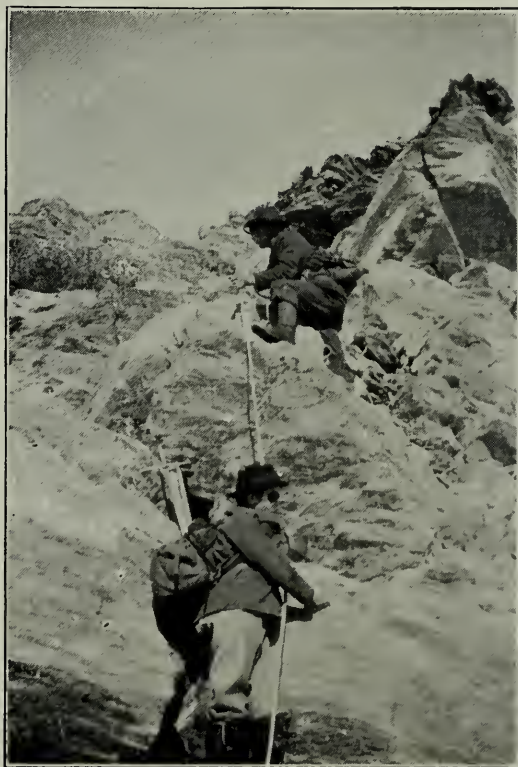
The last steep bit near the top.



At the end of a hot day.



An instant's halt to choose the best way up a steep wall of rock.



The ice-axes are stowed away in a crack, to be brought up by the last man.

SOME TALES OF ALPINE GUIDES

another ; but Zurbriggen, climbing up a bit further, got himself into a firm position, and I scrambled up after him, so that in about ten minutes we had passed this steep bit.

“We now sat for a moment to recover ourselves, for our nerves had been badly shaken by what had so nearly proved a fatal accident. At the time everything happened so rapidly that we had not thought much of it, more especially as we knew that we needed to keep our nerve and take immediate action ; but once it was all over we both felt the effects, and sat for about half an hour before we could even move again. I learned that Zurbriggen, the moment I fell, had snatched up the coil of rope which lay at his feet, and had luckily succeeded in getting hold of the right end first, so that he was soon able to bring me nearly to rest ; but the pull upon him was so great, and he was so badly placed, that he had to let the rope slip through his fingers, removing all the skin, in order to ease the strain while he braced himself in a better position, from which he was able finally to stop me. He told me that had I not been able to turn and grasp the rocks he must inevitably have been dragged from his foot-hold, as the ledge upon which he stood was literally crumbling away beneath his feet. We discovered that two strands of the rope had been cut through by the falling rock, so that

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I had been suspended in mid-air by a single strand."

The remainder of the way was far from easy, but without further mishap the party eventually gained the summit.

That there are many grades of Alpine guides was amusingly exemplified once upon a time at the Montanvert, where in front of the hotel stood the famous Courmazeur guide, Emil Rey (afterwards killed on the Dent du Géant), talking to the Duke of Abruzzi and other first-rate climbers, while a little way off lounged some extremely indifferent specimens of the Chamonix *Société des Guides*. Presently a tourist, got up with much elegance, and leaning on a tall stick surmounted by a chamois horn, appeared upon the scene, and addressed himself to Emil Rey. "Combien pour traverser la Mer de Glace?" he enquired.

"Monsieur," replied Rey, removing his hat with one hand and with the other indicating the group hard by, "voila les guides pour la Mer de Glace! Moi, je suis pour la grande montagne!"

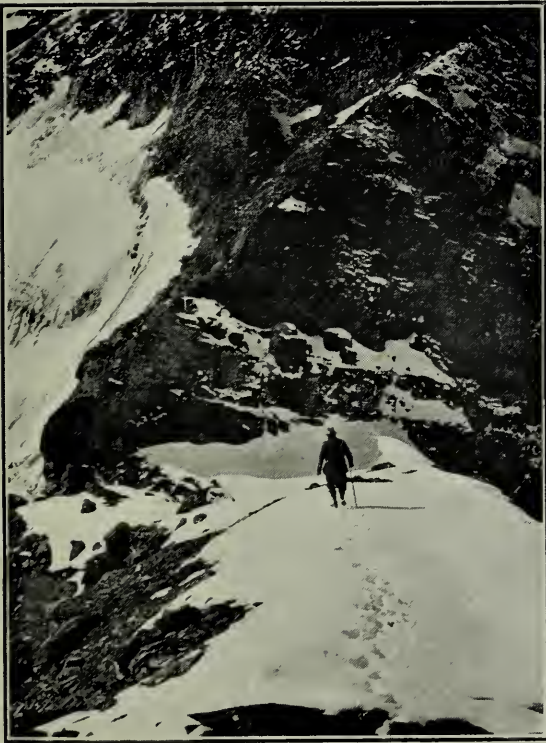
One of the most wonderful escapes in the whole annals of mountaineering was that of a young Englishman, Mr Sloggett, and the well-known guide, Auguste Gentinetta, the second guide, Alphons Furrer, being killed on the spot. They had made a successful ascent of the Matterhorn on 27th July



Auguste Gentinetta, of Zermatt, 1903.



Auguste Gentinetta on the way to the Matterhorn.



The climb up the Matterhorn by the ordinary Swiss route begins at the rocky corner to the left of the picture.



The BERGSCHRUND, open when the accident to Mr. Sloggett's party took place, was above the ice cliff below which the man is standing.

SOME TALES OF ALPINE GUIDES

1900, and were the first of three parties on the descent. When nearly down the mountain, not far from the Hörnli ridge, an avalanche of stones and rocks swept them off their feet. Furrer's skull was smashed, and he was killed immediately, and the three, roped together, were precipitated down a wall of ice. Their axes were wrenched from their grasp, and they could do nothing to check themselves. Gentinetta retained full consciousness during the whole of that awful descent, and while without the slightest hope that they could escape with their lives, he in no way lost his presence of mind. About 800 feet below the spot where their fall commenced was a small *Bergschrund*, or crack across the ice. This was full of stones and sand, and into it the helpless climbers were flung; had they shot over it nothing in this world could have saved them. Gentinetta, though much bruised and knocked about, had no bones broken, and he at once took means to prevent an even worse disaster than that which had already happened, for Mr Sloggett had fallen head downwards, with his face buried in sand, and was on the point of suffocation. Well was it for him that his guide was a man of promptness and courage. Without losing an instant Gentinetta pulled up his traveller and got his face free, clearing the sand out of his mouth, and doing all that mortal could for him. Mr Sloggett's jaw and two of his teeth were broken,

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but his other injuries were far less than might have been expected. Nevertheless, the position of the two survivors was still a most perilous one. They were exactly at the spot on to which almost every stone which detached itself from that side of the mountain was sure to fall, and their ice axes were lost, rendering it almost impossible for them to work their way to a place of safety. Still, to his infinite credit, the guide did not lose heart. By some means, which he now declares he is unable to understand, he contrived to climb, and to assist his gentleman, up that glassy, blood-stained wall, which even for a party uninjured, and properly equipped, it would have been no light task to surmount. This desperate achievement was rendered doubly trying by Gentinetta's being perfectly aware that if any more stones fell the two mountaineers must inevitably be swept away for the second time. At last they gained their tracks and sought a sheltered spot, where they could safely rest a little. Here they were joined by the other parties, who rendered invaluable help during the rest of the descent. The two sufferers finally arrived at the Schwarzsee Hotel, whence they were carried down the same evening to Zermatt.

The next day a strong party started for the scene of the accident to recover the body of the dead guide, Furrer. It was a difficult and a dangerous task,



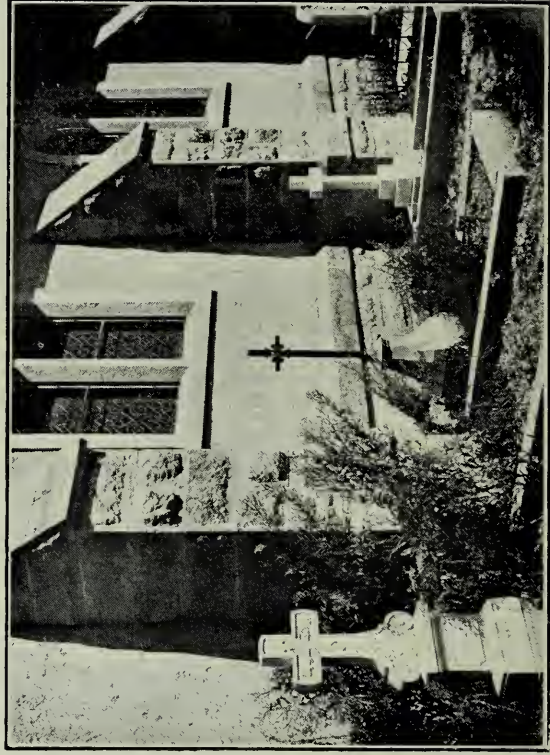
Auguste Gentinetta on a Mountain Top, 1903.



The cliff of ice over which Mr. Slo-gent's party must have been precipitated in they had not been dashed into the BERGSCHRUND.



The ruined Chapel by the Schwarzsee.



The last resting place at Zermatt of some English climbers.

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and those who examined the wall down which the fall took place expressed their amazement that two wounded men, without axes, should have performed what seemed the incredible feat of getting up it.

Both Mr Sloggett and Gentinetta made an excellent recovery, though they were laid up for many weeks after their memorable descent of the Matterhorn.

The qualities found in a first-class guide include not only skill in climbing, but the ability to form a sound conclusion when overtaken by storm and mist. The following experience which took place in 1874, and which I am permitted by Mrs Maund to quote from her late husband's article in *The Alpine Journal*, proves, by its happy termination, that Maurer's judgment in a critical position was thoroughly to be relied on. Mr Maund had just arrived at La Bérarde, in Dauphiné, and he writes:—

“The morning of the 29th broke wet and stormy, and Rodier strongly advised me not to start; this, however, was out of the question, as I was due at La Grave on that day to keep my appointment with Mr Middlemore. After waiting an hour, to give the weather a chance, we started in drizzling rain at 5 A.M. Desolate as the Val des Étançons must always look, it appeared doubly gloomy that morning, with its never-ending monotony of rock and moraine unrelieved by a single patch of green.

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As we neared the glacier, the weather fortunately cleared, and the clouds, which till then had enveloped everything, began to mount with that marvellous rapidity only noticeable in mountain districts, leaving half revealed the mighty cliffs of the Meije towering 5000 feet almost sheer above us. As the wind caught and carried into the air the frozen sheets of snow on his summit, the old mountain looked like some giant bill distributor throwing his advertisements about. Entirely protected from the wind, we whiled away an hour and a half, searching with our telescope for any feasible line of attack. Having satisfied ourselves that on this side the mountain presented enormous, if not insurmountable, difficulties, we shouldered our packs and made tracks for the Brèche, which we reached at 11.45.

“Meanwhile the weather had become worse again, and during the last part of the ascent it was snowing heavily; the wind too, from which we had been protected on the south side of the col, was so strong that we were absolutely obliged to crawl over to the north side. Our position was by no means a pleasant one; neither Martin nor I knew anything of the pass, and Rodier, who had told us overnight that he had crossed it more than once, seemed to know no more, and although sure of the exact bearing of La Grave, we could

SOME TALES OF ALPINE GUIDES

not, owing to the fast falling snow, see further than 300 or 400 yards in advance ; added to this, it was intensely cold. Having paid Rodier 20 francs (a perfect waste of money, as it is impossible to mistake the way to the Brèche from the Val des Étançons, and, as I have said, he could not give us the least clue to the descent on the La Grave side), we dismissed him, hoping devoutly that he might break his—well, his ice axe, we'll say—on the way down. By keeping away to the right of the Brèche and down a steep slope, we crossed the crevasses which lay at its base without difficulty. We then bore to the left across a plateau, on which the snow lay very deep ; floundering through this sometimes waist deep, we reached the upper ice-fall of the glacier, and after crossing several crevasses became involved in a perfect net-work of them. After a consultation, we determined to try to the right, but met with no better success, as again we were checked by an absolute labyrinth. At last, about five o'clock, we took to some rocks which divide the glacier into two branches. Meanwhile the snow was falling thicker and thicker, and, driven by the strong N.W. wind which caught up and eddied about what had already fallen, it appeared to come from every quarter at once. It was impossible to see more than a few yards in advance, and the rocks which under

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ordinary circumstances would have been easy, were, with their coating of at least 4 inches of snow, much the reverse, as it was quite impossible to see where to put hand or foot. Our only trust was in our compass, which assured us that while keeping to the backbone of this ridge we were descending in an almost direct line towards La Grave.

"We had at most two hours of daylight before us, but there was still a hope that by following our present line we should get off the glacier before dark. How I regretted now the time lost in the morning. A little before seven we were brought to a standstill; our further direct descent was cut off by a precipice, while the rocks on either side fell almost sheer to the glaciers beneath. It was too late to think of looking for another road, so nothing now remained but to find the best shelter we could and bivouac for the night. We re-ascended to a small platform we had passed a short time before, and selecting the biggest and most sheltered bit of rock on it, we piled up the few movable stones there were about, to form the outside wall to our shelter, and having cleared away as much of the snow as we could from the inside, laid our ice axes across the top as rafters, with a sodden mackintosh—ironically called a waterproof by Mr Carter—over all for

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a roof. Despite this garment, I was wet to the skin. Luckily, we had each of us a spare flannel shirt and stockings in our knapsacks, but as the meagre dimensions of our shelter would not admit of the struggles attendant on a change, we were obliged to go through the operation outside. I tried to be cheerful, and Martin tried to be facetious as we wrung out our wet shirts while the snow beat on our bare backs, but both attempts were lamentable failures. If up to the present time my readers have not stripped in a snow-storm, let me strongly advise them never to attempt it. Having got through the performance as quickly as possible, we crawled into our shelter, but here again my ill luck followed me, for in entering I managed to tread on the tin wine-flask which Martin had thrown aside, and, my weight forcing out the cork, every drop of wine escaped. After packing myself away as well as I could in the shape of a pot-hook, Martin followed, and pot-hooked himself alongside me. We were obliged to assume this elementary shape, as the size of our shelter would not admit of our lying straight. All the provisions that remained were then produced. They consisted of a bit of bread about the size of a breakfast-roll, one-third of a small pot of preserved meat, about two ounces of raw bacon with the hide on, and half a small flask of a filthy

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compound called Genèpie, a sort of liqueur ; besides this, we mustered between us barely a pipe-full of tobacco, and eight matches in a metal-box. The provisions I divided into three equal parts—one-third for that night's supper, and the remaining two-thirds for the next day. I need not enlarge on the miseries of that night. The wind blew through the chinks between the stones, bringing the snow with it, until the place seemed all chinks ; then the mackintosh with its weight of snow would come in upon us, and we had with infinite difficulty to prop it up again, only to go through the same operation an hour later ; at last, in sheer despair, we let it lie where it fell, and found to our relief it kept us warmer in that position. The snow never ceased one moment although the wind had fallen, and when morning broke there must have been nearly a foot of it around and over us. A more desolate picture than that dawn I have never seen. Snow everywhere. The rocks buried in it, and not a point peeping out to relieve the unbroken monotony. The sky full of it, without a break to relieve its leaden sameness, and the heavy flakes falling with that persistent silence which adds so much to the desolation of such a scene.

“I was all for starting ; for making some attempt either to get down, or to recross the col. Martin was dead against it—and I think now he was

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right. First of all, we could not have seen more than a few yards ahead; the rocks would have been considerably worse than they were the evening before, and if we had once got involved amongst the crevasses it was on the cards that we shouldn't get clear of them again; added to this, even if we could hit off the col, what with want of sleep and food, and the fatigue consequent on several hours' floundering in deep snow, we might not have strength to reach it. At any rate, we decided not to start until it cleared sufficiently to let us see where we were going. Our meagre stock of provisions was redivided into three parts, one of which we ate for breakfast. I then produced the pipe, but to our horror we found the matches were still damp. Martin, who is a man of resource, immediately opened his shirt and put the box containing them under his arm to dry. Meanwhile the snow never ceased, and the day wore on without a sign of the weather breaking. If it had not been for the excitement of those matches, I do not know how we should have got through that day; at last, however, after about six hours of Martin's fond embrace, one consented to burn, and I succeeded in lighting the pipe. We took turns at twelve whiffs each, and no smoke, I can conscientiously say, have I ever enjoyed like that one. During this never-ending day we got a few

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snatches of sleep, but the cold consequent on our wet clothes was so great, our position so cramped, and the rocks on which we lay so abominably sharp, that these naps were of the shortest duration.

"A little before six the snow ceased, and for a moment the sun tried to wink at us through a chink in his snow-charged blanket, before he went to bed—long enough, however, for us to see La Grave far below, with every alp almost down to the village itself covered with its white mantle.

"And then, as our second night closes in, the snow recommences, and we draw closer together even than before; for we feel that during the long hours to come we must economise to the fullest the little animal heat left in us.

"That night I learnt to shiver, not the ordinary shivers, but fits lasting a quarter of an hour, during which no amount of moral persuasion could keep your limbs under control; and it was so catching! If either of us began a solo, the other was sure to join in, and we shivered a duet until quite exhausted. As we had nothing to drink, I had swallowed a considerable quantity of snow to quench my thirst, and this, acting on an almost empty stomach, produced burning heat within, while the cold, which was now intense, acting externally, induced fever and light-headedness, and

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once or twice I caught myself rambling. Martin, too, was affected in the same way. The long hours wore on, and still there was no sign of better weather. Towards midnight things looked very serious. Martin, who had behaved like a brick, thought 'it was very hard to perish like this in the flower of his age,' and I, too, thought of writing a line as well as I was able in my pocket-book, bequeathing its contents to my finder, then of sleeping if I could and waking up with the Houris; but I had the laugh of him afterwards, because he thought aloud and I to myself. However, this mood did not last long, and after shaking hands, I do not quite know why, because we had not quarrelled, we cuddled up again, and determined, whatever the weather, to start at daybreak. In half an hour the snow ceased, the wind backed to the S., and the temperature rose as if by magic; while the snow melting above trickled down in little streams upon us. We cleared the snow off the mackintosh, and putting it over us again, slept like logs in comparative warmth. When I awoke the sun was well up, and on looking round I could hardly realise the scene. Not a cloud in the sky! Not a breath of wind! The rocks around us, which yesterday were absolutely buried, were showing their black heads everywhere, and only a few inches of snow remained, so rapid had been

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the thaw; while far away to the N. the snow-capped summits of the Pennine Alps stood out in bold relief against the cloudless sky.

"I woke Martin, and at a quarter to six, after thirty-five hours' burial, we crawled out of our shelter. At first neither of us could stand, so chilled were we by long exposure, and so cramped by our enforced position, but after a good thaw in the hot sun we managed to hobble about, and pack the knapsacks. After eating the few scraps that remained, we started at seven o'clock up the ridge that we had descended two days before.

"We were very shaky on our legs at first, but at each step the stiffness seemed to wear off, and after half an hour we quite recovered their use; but there remained an all-pervading sense of emptiness inside that was not exhilarating. After ascending a short distance, and with my telescope carefully examining the rocks, we determined to descend to the glacier below us (the western branch), and crossing this get on to some more rocks beneath the lower ice-fall. If we could get down these our way seemed clear.

"I won't trouble you with the details of the descent: suffice it to say that, without encountering any difficulty, we stepped on to grass about twelve o'clock, and descending green slopes, still patched here and there with snow (which would have provided

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sufficient Edelweiss for all the hats of the S.A.C.), we arrived safely at La Grave, after a pleasant little outing of fifty-six hours. Mr Middlemore, despairing of my coming, had started for England the night before, and had left Jaun to await my arrival.

"After a hot bath, and some bread-crumbs soaked in warm wine, I went to bed, and the next morning I awoke as well as I am now, with the exception of stiffness in the knees, and a slight frost-bite on one hand. Martin, however, who, I suspect, had eaten a good deal on his arrival, was seized with severe cramp, and for some hours was very ill.

"Two days' rest put us all to rights again."

Though rivalry may be keen between first-class guides, and bitter things be said now and then in the heat of the struggle for first place, yet when a great guide has passed away, it is seldom that one hears anything but good of him. A pretty story is told—and I believe it is true—of the son of old Maquignaz of Valtournanche, which exemplifies this chivalrous trait. Maquignaz and Jean Antoine Carrel were often in competition in the early days of systematic climbing, and if not enemies, they were at any rate hardly bosom friends. Carrel's tragic and noble death on the Matterhorn will be recalled by readers of my *True Tales of Mountain Adventure*. Not very long ago

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a French climber was making an ascent of the Italian side of the Matterhorn, with "young" Maquignaz as guide. "Where did Carrel fall?" he innocently enquired, as they ascended the precipitous cliffs on the Breuil side of the mountain. Young Maquignaz turned sharply to him and exclaimed: "Carrel n'est pas tombé! *Il est mort!*"

CHAPTER II

TWO DAYS ON AN ICE-SLOPE

THERE are few instances so striking of the capacity of a party of thoroughly experienced mountaineers to get out of a really tight place, as was the outcome of the two days spent by Messrs Mummery, Slingsby, and Ellis Carr, on an ice slope in the Mont Blanc district. The party intended trying to ascend the Aiguille du Plan direct from the Chamonix valley. Mr Ellis Carr has generously given me permission to make use of his account, which I quote from *The Alpine Journal*. He relates the adventures of himself and his two friends, whose names are household words to climbers, as follows :—

“Mummery, Slingsby, and I started at 4 P.M., with a porter carrying the material for our camp. This comprised a silk tent of Mummery’s pattern, only weighing $1\frac{1}{2}$ to 2 lbs.; three eider-down sleeping-bags, 9 lbs.; cooking apparatus of thin tin, $1\frac{1}{2}$ lbs.; or, with ropes, rucksacks, and sundries, about 25 lbs., in addition to the weight of the

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provisions. Though not unduly burdened, the porter found the valley of boulders exceedingly troublesome, and in spite of three distinct varieties of advice as to the easiest route across them, made such miserably slow progress, often totally disappearing amongst the rocks like a water-logged ship in a trough of the sea, that we were forced to pitch our tents on the right moraine of the Nantillons Glacier, instead of near the base of our peak, as intended. The *gîte*, built up with stones on the slope of the moraine, with earth raked into the interstices, was sufficiently comfortable to afford Mummery and myself some sleep. A stone, however, far surpassing the traditional *gîte* lump in aggressive activity, seemed, most undeservedly, to have singled out Slingsby as its innocent victim, and, judging by the convulsions of his sleeping-bag, and the sighs and thumps which were in full swing every time I woke up, it must have kept him pretty busy all night dodging its attacks from side to side. His account of his sufferings next morning, when Mummery and I were admittedly awake, fully confirmed and explained these phenomena, but on going for the enemy by daylight, he had the satisfaction of finding that he had suffered quite needlessly, the stone being loose and easily removed. We used Mummery's silk tent for the first time, and found that it afforded ample room for three

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men to lie at full length without crowding. The night, however, was too fine and still to test the weather-resisting power of the material, and as this was thin enough to admit sufficient moonlight to illuminate the interior of the tent, and make candle or lamp superfluous, we inferred that it might possibly prove to be equally accommodating in the case of rain and wind. It was necessary, moreover, on entering or leaving the tent, to adopt that form of locomotion to which the serpent was condemned to avoid the risk of unconsciously carrying away the whole structure on one's back. We started next morning about three o'clock, leaving the camp kit ready packed for the porter, whom we had instructed to fetch it during the day, and pushed on to the glacier at the foot of our mountain at a steady pace, maintained in my case with much greater ease than would have otherwise been possible by virtue of some long, single-pointed screw spikes inserted overnight in my boot soles; and I may here venture to remark that a few of these spikes, screwed into the boots before starting on an expedition where much ice-work is expected, appear to offer a welcome compromise between ponderous crampons and ordinary nails. They do not, I think, if not too numerous, interfere with rock-climbing, and can be repeatedly renewed when worn down. A slight modification in the shape

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would further facilitate their being screwed in with a box key made to fit.¹

“Leaving the rock buttress, the scene of our reconnaissance on the 11th, on the right, we struck straight up the glacier basin between it and the Aiguille de Blaitière, which glacier appeared to me to be largely composed of broken fragments of ice mixed with avalanche snow from the hanging glaciers and slopes above. Keeping somewhat to the left, we reached the *bergschrund*, which proved to be of considerable size, extending along the whole base of the couloir, and crossed it at a point immediately adjoining the rocks on the left. The axe at once came into requisition, and we cut steadily in hard ice up and across the couloir towards the small rib or island of rock before-mentioned as dividing it higher up into two portions. The rocks at the base of this rib, though steep, gritty, and loose, offered more rapid going than the ice, and we climbed then to a gap on the ridge above, commanding a near view of the perpendicular country in front of us. Far above us, and immediately over the top of the right-hand section of the couloir, towered the ice cliffs of the hanging glacier we had tried to reach on the 11th, and beyond these again, in the grey morning light, we caught the glimpse of a second and even a third

¹ These are now known as Mummery nails, and are often used by climbers.

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rank of *séracs* in lofty vista higher up the mountain. As before observed, this section of the couloir seemed admirably placed for receiving ice-falls, and we now saw that it formed part of the natural channel for snow and *débris* from each and all of these glaciers. We therefore directed our attention to our friend on the left, and after a halt for breakfast, traversed the still remaining portion of the dividing ridge, turning a small rock pinnacle on its right, and recommenced cutting steps in the hard ice which faced us. As has been before remarked, it is difficult to avoid over-estimating the steepness of ice-slopes, but, allowing for any tendency towards exaggeration, I do not think I am wrong in fixing the angle of the couloir from this point as not less than 50° . We kept the axe steadily going, and with an occasional change of leader, after some hours' unceasing work, found ourselves approaching the base of the upper portion of the couloir, which from below had appeared perpendicular. We paused to consider the situation. For at least 80 to 100 feet the ice rose at an angle of 60° to 70° , cutting off all view of the face above, with no flanking wall of rock on the right, but bounded on the left by an overhanging cliff, which dripped slightly with water from melting snow above. The morning was well advanced, and we kept a sharp look-out aloft for any stray stones which might fancy a descent in our direction. None came,

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and we felt gratified at this confirmation of our judgment as to the safety of this part of the couloir. However, the time for chuckling had not yet come. As I stated, we had halted to inspect the problem before us. Look as we might we could discover no possibility of turning the ice wall either to the right or left, and though, as we fondly believed and hoped, it formed the only barrier to easier going above, the terrible straightness and narrowness of the way was sufficient to make the very boldest pause to consider the strength of his resources.

“How long *I* should have paused before beating a retreat, if asked to lead the way up such a place, I will not stop to enquire, but I clearly remember that my efforts to form some estimate of the probable demand on my powers such a feat would involve were cut short by Mummery's quiet announcement that he was ready to make the attempt. Let me here state that amongst Mummery's other mountaineering qualifications not the least remarkable is his power of inspiring confidence in those who are climbing with him, and that both Slingsby and I experienced this is proved by the fact that we at once proceeded, without misgiving or hesitation, to follow his lead. We had hitherto used an 80-foot rope, but now, by attaching a spare 100-foot length of thin rope, used double, we afforded the leader an additional 50 feet. Mummery commenced cutting,

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and we soon approached the lower portion of the actual ice wall, where the angle of the slope cannot have been less than 60° .

"I am not aware that any authority has fixed the exact degree of steepness at which it becomes impossible to use the ice axe with both hands, but, whatever portion of a right angle the limit may be, Mummery very soon reached it, and commenced excavating with his right hand caves in the ice, each with an internal lateral recess by which to support his weight with his left. Slingsby and I, meanwhile possessing our souls in patience, stood in our respective steps, as on a ladder, and watched his steady progress with admiration, so far as permitted us by the falling ice dislodged by the axe.

"Above our heads the top of the wall was crowned by a single projecting stone towards which the leader cut, and which, when reached, just afforded sufficient standing-room for both feet. The ice immediately below this stone, for a height of 12 or 14 feet, was practically perpendicular, and Slingsby's definition of it as a 'frozen waterfall' is the most appropriate I can find. Here and there Mummery found it necessary to cut through its entire thickness, exposing the face of the rock behind.

"On reaching the projecting stone the leader was again able to use the axe with both hands, and slowly disappeared from view; thus completing,

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without pause or hitch of any kind, the most extraordinary feat of mountaineering skill and nerve it has ever been my privilege to witness.

“The top of the wall surmounted, Slingsby and I expected every moment to hear the welcome summons to follow to easier realms above. None came. Time passed, the only sounds besides the occasional drip of water from the rocks on our left, or the growl of a distant avalanche, being that of the axe and the falling chips of ice, as they whizzed by or struck our heads or arms with increasing force. The sounds of the axe strokes gradually became inaudible, but the shower continued to pound us without mercy for more than an hour of inaction, perhaps more trying to the nerves, in such a position, than the task of leading. The monotony was to some extent varied by efforts to ward off from our heads the blows of the falling ice, and by the excitement, at intervals, of seeing the slack rope hauled up a foot or so at a time. It had almost become taut, and we were preparing to follow, when a shout from above, which sounded from where we stood muffled and far away, for more rope, kept us in our places. It was all very well to demand more rope, but not so easy to comply. The only possible way to give extra length was to employ the 100 feet of thin rope single, instead of double, at which we hesi-

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tated at first, but, as Mummery shouted that it was absolutely necessary, we managed to make the change, though it involved Slingsby's getting out of the rope entirely during the operation. To any one who has not tried it I should hardly venture to recommend, as an enjoyable diversion, the process, which must necessarily occupy both hands, of removing and re-adjusting 180 feet of rope on an ice slope exceeding 60° at the top of a steep couloir some 1000 feet high. The task accomplished, we had not much longer to wait before the shout to come on announced the termination of our martyrdom. We went on, but, on passing in turn the projecting stone, and catching sight of the slope above, we saw at a glance that our hopes of easy going must, for the present, be postponed. Mummery, who had halted at the full extent of his tether of about 120 feet of rope, was standing in his steps on an ice slope quite as steep as that below the foot of the wall we had just surmounted. He had been cutting without intermission for two hours, and suggested a change. Being last on the rope, I therefore went ahead, cutting steps to pass, and took up the work with the axe. The ice here was occasionally in double layer, the outer one some 3 or 4 inches in thickness, which, when cut through, revealed a space of about equal depth behind, an arrangement at times very convenient,

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as affording good hand-holes without extra labour. I went on for some time cutting pigeon-holes on the right side of the couloir, and, at the risk of being unorthodox, I would venture to point out what appears to me the advantages of this kind of step on very steep ice. Cut in two perpendicular rows, alternately for each foot, the time lost in zigzags is saved, and no turning steps are necessary; they do not require the ice to be cut away so much for the leg as in the case of lateral steps, and are therefore less easily filled up by falling chips and snow. Being on account of their shape more protected from the sun's heat, they are less liable to be spoiled by melting, and have the further advantage of keeping the members of the party in the same perpendicular line, and consequently in a safer position. They also may serve as hand-holds. To cut such steps satisfactorily it is necessary that the axe be provided with a point long enough to penetrate to the full depth required for the accommodation of the foot up to the instep, without risk of injury to the shaft by repeated contact with the ice.

"As we had now been going for several hours without food, and since leaving the rock rib, where we had breakfasted, had come across no ledge or irregularity of any kind affording a resting-place, it was with no little satisfaction that I descried,

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on the opposite side of the couloir, at a spot about 30 or 40 feet above, where the cliff on our left somewhat receded, several broken fragments of rock cropping out of the ice, of size and shape to provide seats for the whole party. We cut up and across to them, and sat down, or rather hooked ourselves on, for a second breakfast. We were here approximately on a level with the summit of our rock buttress of the 11th, and saw that it was only connected with the mountain by a broken and dangerous-looking ridge of ice and *névé* running up to an ice-slope at the foot of the glacier cliffs. The gap in the latter was not visible from our position. The tower we had tried to turn appeared far below, and the intervening rocks of the buttress, though not jagged, were steep and smooth like a roof. The first gleams of sunshine now arrived to cheer us, and, getting under way once more, we pushed on hopefully, as the couloir was rapidly widening and the face of the mountain almost in full view. We had also surmounted the rock wall which had so long shut out the prospect on our left, and it was at this point that, happening to glance across the slabs, we caught sight of a large flat rock rapidly descending. It did not bound nor roll, but slid quietly down with a kind of stealthy haste, as if it thought, though rather late, it might still catch us, and was anxious not to alarm

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us prematurely. It fell harmlessly into the couloir, striking the ice near the rock rib within a few feet of our tracks, and we saw no other falling stones while we were on the mountain.

"Leaving the welcome resting-place, Mummery again took the lead, and cut up and across the couloir, now becoming less steep, to a rib or patch of rocks higher up on the right, which we climbed to its upper extremity, a distance of some 70 or 80 feet.

"Here, taking to the ice once more, we soon approached the foot of the first great snow-slope on the face, and rejoiced in the near prospect of easier going. At the top of this slope, several hundred feet straight before us, was a low cliff or band of rocks, for which we decided to aim, there being throughout the entire length of the intervening slope no suspicious grey patches to indicate ice. The angle was, moreover, much less severe, and it being once more my turn to lead, I went at it with the zealous intention of making up time. My ardour was, however, considerably checked at finding, when but a short distance up the slope, that the coating of *névé* was so exceedingly thin as to be insufficient for good footing without cutting through the hard ice below. Instead, therefore, of continuing in a straight line for the rocks, we took an oblique course to the right,

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towards one of the hanging glaciers before referred to, and crossing a longitudinal crevasse, climbed without much difficulty up its sloping bank of *névé*. Hurrah! here was good snow at last, only requiring at most a couple of slashes with the adze end of the axe for each step. If this continued we had a comparatively easy task before us, as the rocks above, though smooth and steep, were broken up here and there by bands and streaks of snow. Taking full advantage of this our first opportunity for making speed, we cut as fast as possible and made height rapidly. We still aimed to strike the band of rocks before described, though at a point much more to the right, and nearer to where its extremity was bounded by the ice-cliffs of another hanging glacier; but, alas! as we approached nearer and nearer to the base of the cliffs, looming apparently higher and higher over our heads, the favouring *névé*, over which we had been making such rapid progress, again began to fail, and before we could reach the top of the once more steepening slope the necessity of again resorting to the pick end of the axe brought home the unwelcome conviction that our temporary respite had come to an end, and that, instead of snow above, and apart from what help the smooth rocks might afford, nothing was to be expected but hard, unmitigated ice.

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"We immediately felt that, as it was already past noon, the establishment of this fact would put a totally different complexion on our prospects of success, and, instead of reaching the summit, we might have to content ourselves with merely crossing the ridge. We continued cutting, however, and reached the rocks, the last part of the slope having once more become exceedingly steep. To turn the cliff, here unclimbable, we first spent over half an hour in prospecting to the right, where a steep ice-gully appeared between the rocks and the hanging glacier; but, abandoning this, we struck off to the left, cutting a long traverse, during which we were able to hitch the rope to rocks cropping out through the ice. The traverse landed us in a kind of gully, where, taking to the rocks whenever practicable, though climbing chiefly by the ice, we reached a broken stony ledge, large and flat enough to serve as a luncheon place, the only spot we had come across since leaving the rock rib, where it was possible really to rest sitting. Luncheon over, we proceeded as before, choosing the rocks as far as possible by way of change, though continually obliged to take to the ice-streaks by which they were everywhere intersected. This went on all the rest of the afternoon, till, when daylight began to wane, we had attained an elevation considerably

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above the gap between our mountain and the Aiguille de Blaitière, or more than 10,900 feet above the sea.

"The persistent steepness and difficulty of the mountain had already put our reaching the ridge before dark entirely out of the question, though we decided to keep going as long as daylight lasted, so as to leave as little work as possible for the morrow.

"The day had been gloriously fine, practically cloudless throughout, and I shall never forget the weird look of the ice-slopes beneath, turning yellow in the evening light, and plunging down and disappearing far below in the mists which were gathering at the base of the mountain; also, far, far away, we caught a glimpse of the Lake of Geneva, somewhere near Lausanne. I had turned away from the retrospect, when an exclamation from Slingsby called me to look once more. A gap had appeared in the mists, and there, some 2700 feet below us, as it were on an inferior stage of the world, we caught a glimpse of the snow-field at the very foot of the mountain, dusky yellow in the last rays of the sun. Mummery was in the meantime continuing the everlasting chopping, in the intervals of crawling up disobliging slabs of rock, till twilight began to deepen into darkness, and we had to look about for a perch on which

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to roost for the night. The only spot we could find, sufficiently large for all three of us to sit, was a small patch of lumps of rocks, more or less loose, some 20 or 30 feet below where we stood, and we succeeded, just as the light failed, or about 8.30 P.M., and after some engineering, in seating ourselves side by side upon it. Our boots were wet through by long standing in ice-steps, and we took them off and wrung the water out of our stockings. The others put theirs on again, but, as a precaution against frost-bite, having pocketed my stockings, I put my feet, wrapped in a woollen cap, inside the rucksack, with the result that they remained warm through the night. The half hour which it took me next morning to pull on the frozen boots proved, however, an adequate price for the privilege of having warm feet. As a precaution against falling off our shelf we hitched the rope over a rock above and passed it round us, and to make sure of not losing my boots (awful thought!), I tied them to it by the laces.

“After dinner we settled down to spend the evening. The weather fortunately remained perfect, and the moon had risen, though hidden from us by our mountain. Immediately below lay Chamonix, like a cheap illumination, gradually growing more patchy as the night advanced and the candles

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went out one by one, while above the stars looked down as if silently wondering why in the world we were sitting there. The first two hours were passed without very much discomfort, but having left behind our extra wraps to save weight, as time wore on the cold began to make itself felt, and though fortunately never severe enough to be dangerous, made us sufficiently miserable. Packed as we were, we were unable to indulge in those exercises generally adopted to induce warmth, and we shivered so vigorously at intervals that, when all vibrating in unison, we wondered how it might affect the stability of our perch. Sudden cramp in a leg, too, could only be relieved by concerted action, it being necessary for the whole party to rise solemnly together like a bench of judges, while the limb was stretched out over the valley of Chamonix till the pain abated, and it could be folded up and packed away once more. We sang songs, told anecdotes, and watched the ghostly effect of the moonlight on a subsidiary pinnacle of the mountain, the illuminated point of which, in reality but a short distance away, looked like a phantom Matterhorn seen afar off over an inky black *arête* formed by the shadow thrown across its base by the adjoining ridge. We had all solemnly vowed not to drop asleep, and for me this was essential, as my centre of gravity was only just within the base of support ;

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but while endeavouring to give effect to another chorus, in spite of the very troublesome *vibrato* before referred to, I was grieved and startled at the sudden superfluous interpolation of two sustained melancholy bass notes, each in a different key and ominously suggestive of snoring. The pensive attitude of my companions' heads being in keeping with their song, in accordance with a previous understanding, I imparted to Mummery, who sat next to me, a judicious shock, but, as in the case of a row of billiard balls in contact, the effect was most noticeable at the far end, and *Slingsby* awoke, heartily agreeing with me how weak it was of Mummery to give way thus. The frequent necessity for repeating this operation, with strengthening variations as the effect wore off, soon stopped the chorus which, like Sullivan's 'Lost Chord,' trembled away into silence.

"The lights of Chamonix had by this time shrunk to a mere moth-eaten skeleton of their earlier glory, and I became weakly conscious of a sort of resentment at the callous selfishness of those who could thus sneak into their undeserved beds, without a thought of the three devoted explorers gazing down at them from their eyrie on the icy rocks.

"From 2 to 4 o'clock the cold became more intense, aggravated by a slight 'breeze of morning,' and

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while waiting for dawn we noticed that it was light enough to see.

“Daylight, however, did not help Mummery to find his hat, and we concluded it had retired into the *bergschrand* under cover of darkness.

“We helped each other into a standing position, and decided to start for the next patch of rocks above, from there to determine what chance of success there might be in making a dash for the summit, or, failing this, of simply crossing the ridge and descending to the Col du Géant. There was very little food left, and, as we had brought no wine, breakfast was reduced to a slight sketch, executed with little taste and in a few very dry touches. Owing to the time required to disentangle virulently kinked and frozen ropes, etc., the sun was well above the horizon when we once more started upwards, though unfortunately, just at this time, when his life-giving rays would have been most acceptable, they were entirely intercepted by the ridge of the Blaitière. We started on the line of steps cut the night before, but soon after Mummery had recommenced cutting, the cold, or rather the impossibility, owing to the enforced inaction, to get warm, produced such an overpowering feeling of drowsiness that Slingsby and I, at Mummery's suggestion, returned to the perch, and jamming ourselves into the space which had before accommodated our six legs, endeavoured

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to have it out in forty winks. Mummery meanwhile continued step-cutting, and at the end of about half an hour, during which Slingsby and I were somewhat restored by a fitful dose, returned, and we tied on again for another attempt.

"Surmounting the patches of rock immediately above our dormitory, we arrived at the foot of another slope of terribly steep, hard ice, some 200 feet in height. At the top of this again was a vertical crag 14 or 15 feet high, forming the outworks of the next superior band of rocks, which was interspersed with ice-streaks as before. A few feet from the base of this crag was a narrow ledge about 1 foot in width, where we were able to sit after scraping it clear of snow. Slingsby gave Mummery a leg up round a very nasty corner, and he climbed to a point above the crag, whence he was able to assist us with the rope up a still higher and narrower ledge. Beyond was another steep slope of hard ice, topped by a belt of rocks, as before.

"Before reaching this point the cold had again begun to tell upon me, and I bitterly regretted the mistaken policy of leaving behind our extra wraps, especially as the coat I was wearing was not lined. As there was no probability of a change for the better in the nature of the going before the ridge was reached, I began to doubt the wisdom of proceeding, affected as I was, where a false step might

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send the whole party into the *bergschrand* 3000 feet below ; but it was very hard, with the summit in view and the most laborious part of the ascent already accomplished, to be the first to cry 'Hold!' I hesitated for some time before doing so, and the others meanwhile had proceeded up the slope. The rope was almost taut when I shouted to them the state of the case, and called a council of war. They returned to me, and we discussed what was practically something of the nature of a dilemma. To go on at the same slow rate of progress and without the sun's warmth meant, on the one hand, the possible collapse of at least one of the party from cold, while, on the other hand, to turn back involved the descent of nearly 3000 feet of ice, and the passage, if we could not turn it, of the couloir and its ghastly ice-wall. Partly, I think, to delay for a time the adoption of the latter formidable alternative, partly to set at rest any doubt which might still remain as to the nature of the going above, Mummery volunteered to ascend alone to the rocks at the summit of the ice-slope, though the chance of their offering any improved conditions was generally felt to be a forlorn hope. He untied the rope, threw the end down to us, and retraced his steps up the slope, in due time reaching the rocks some 100 or 130 feet above, but, after prospecting in more than one direction, returned to us with the report that they

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offered no improvement, and that the intersecting streaks were nothing but hard ice. He, however, was prepared to continue the attempt if we felt equal to the task. If we could at that moment have commanded a cup of hot soup or tea, or the woollen jackets which in our confidence in being able to reach the ridge we had left behind, I am convinced I should have been quite able to proceed, and that the day and the mountain would have been ours; but in the absence of these reviving influences and that of the sun, I was conscious that in my own case, at any rate, it would be folly to persist, so gave my vote for descending. As the food was practically exhausted, the others agreed that it would be wiser to face the terrible ordeal which retracing our steps involved (we did not then know that it meant re-cutting them), rather than continue the ascent with weakened resources and without absolute certainty of the accessibility of the summit ridge.

“As Slingsby on the previous day had insisted on being regarded merely as a passenger, and had therefore not shared in the step-cutting, it was now arranged that he should lead, while Mummery, as a tower of strength, brought up the rear. Though it was past five o'clock, and of course broad daylight, a bright star could be seen just over the ridge of our mountain, not far from the summit—alas! the only one anywhere near it on that day. We started

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downwards at a steady pace, and soon were rejoicing in the returning warmth induced by the more continuous movement. Before we had gone far, however, we found that most of the steps were partially filled up with ice, water having flowed into them during the previous afternoon, and the work of trimming or practically recutting these was at times exceedingly trying, owing to their distance apart, and the consequent necessity of working in a stooping and cramped position.

“But if the work was tough the worker, fortunately, was tougher still, and Mummery and I congratulated ourselves on being able to send such powerful reserves to the front.

“The morning was well advanced before the sun surmounted the cold screen of the Blaitière, but having once got to work he certainly made up by intensity for his tardy appearance.

“The provisions, with the exception of a scrap or two of cheese and a morsel of chocolate, being exhausted, and having, as before stated, nothing with us in the form of drink, nothing was to be gained by a halt, though, as we descended with as much speed as possible, we kept a sharp look-out for any signs of trickling water with which to quench the thirst, which was becoming distressing.

“Since finally deciding to return, we had cherished the hope that it might still be possible to turn the

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ice-wall by way of the great rock buttress, and made up our minds at any rate to inspect it from above. With this in view, when the point was reached where we had on the previous day struck the flank of the hanging glacier instead of continuing in the tracks which trended to the right across the long ice-slope, we cut straight down by the side of the glacier to its foot, and over the slope below, in the direction of the *séracs* immediately crowning the summit of the buttress.

“On nearer approach, however, it was manifest that even if by hours of step-cutting a passage from the ice to the rocky crest below could be successfully forced, descent by the latter was more than doubtful, while the consequences of failure were not to be thought of.

“Driven, therefore, finally to descend by the couloir, we cut a horizontal traverse which brought us back into the old tracks, a short way above the point where the ice began to steepen for the final plunge, where we braced ourselves for the last and steepest 1000 feet of ice. Slingsby still led, and, on arriving at the spot below our second breakfast-place, where I had last cut pigeon-holes, joyfully announced that one of them contained water. He left his drinking cup in an adjoining step for our use as we passed the spot in turn, and the fact that it was only visible when on a level with our faces may give some idea of the steepness of the descent. The delight of that

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drink was something to remember, though only obtainable in thimblefuls, and I continued dipping so long that Mummery became alarmed, being under the impression that the cup was filled each time.

“Mummery had previously volunteered, in case we were driven to return by the couloir, to descend first, and recut the steps and hand-holes in the ice-wall, and as we approached the brink we looked about for some projecting stone or knob of rock which might serve as a hitch for the rope during the operation. The only available projection was a pointed stone of doubtful security, somewhat removed from the line of descent, standing out of the ice at the foot of a smooth vertical slab of rock on the left. Round this we hitched the rope, Slingsby untying to give the necessary length. With our feet firmly planted, each in its own ice-step, we paid out the rope as Mummery descended and disappeared over the edge. It was an hour before he re-appeared, and this period of enforced inaction was to me, and I think to Slingsby, the most trying of the whole expedition. The want of food was beginning to tell on our strength, the overpowering drowsiness returned, and though it was absolutely essential for the safety of the party to stand firmly in the ice-steps, it required a strong effort to avoid dropping off to sleep in that position. We were fortunately able to steady ourselves by grasping the upper edge

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of the ice where it adjoined the rocky slab under which we stood. This weariness, however, must have been quite as much mental as physical from the long-continued monotony of the work, for when Mummery at last reappeared we felt perfectly equal to the task of descending. The rope was passed behind a boss of *névé* ingeniously worked by Mummery as a hitch to keep it perpendicular, and I descended first, but had no occasion to rely upon it for more than its moral support, as the steps and hand-holds had been so carefully cut. I climbed cautiously down the icy cataract till I reached a point where hand-holds were not essential to maintain the balance, and waited with my face almost against the ice till Slingsby joined me. Mummery soon followed, and rather than leave the spare rope behind detached it from the stone and descended without its aid, his nerve being to all appearance unimpaired by the fatigues he had gone through. I had before had evidence of his indifference while on the mountains to all forms of food or drink, with the single exception, by the way, of strawberry jam, on the production of which he generally capitulates.

“Rejoicing at having successfully passed the steepest portion of the ice-wall without the smallest hitch of the wrong sort, we steadily descended the face of the couloir.

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"Here and there, where a few of the steps had been hewn unusually far apart, I was fain to cut a notch or two for the fingers before lowering myself into the next one below. At last the rock rib was reached, and we indulged in a rest for the first time since turning to descend.

"Time, however, was precious, and we were soon under way again, retracing our steps over the steep loose rocks at the base of the rib till forced again on to the ice.

"Oh, that everlasting hard ice-slope, so trustworthy yet so relentlessly exacting!

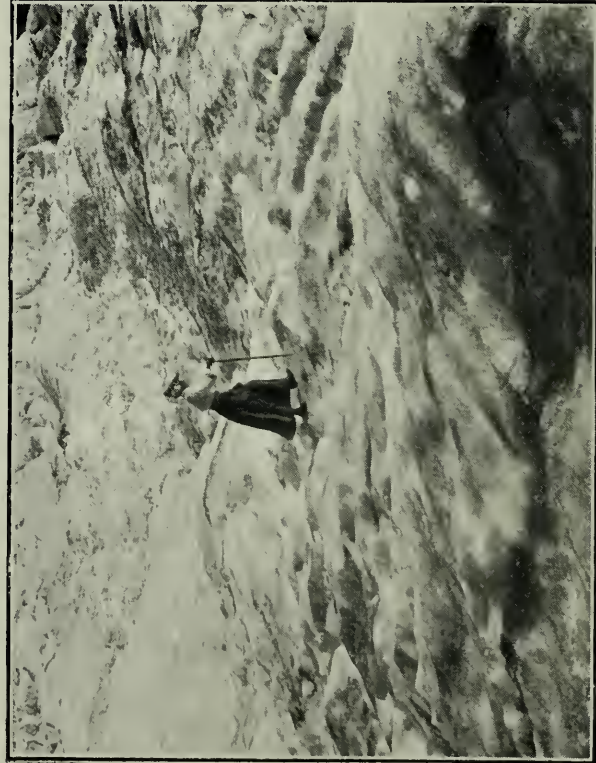
"Before we could clear the rocks, and as if by way of hint that the mountain had had enough of us, and of me in particular (I could have assured it the feeling was mutual), a flick of the rope sent my hat and goggles flying down to keep company with Mummery's in the *bergschrand*, and a sharp rolling stone, which I foolishly extended my hand to check, gashed me so severely as to put climbing out of the question for more than a week. As small pieces of ice had been whizzing down for some time from above, though we saw no stones, it was satisfactory to find our steps across the lower part of the couloir in sufficiently good order to allow of our putting on a good pace, and we soon reached the sheltering rock on the opposite side and the slopes below the *bergschrand* wherein our hats, after losing their heads,

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had found a grave. The intense feeling of relief on regaining, at 5.55 P.M., safe and easy ground, where the lives of the party were not staked on every step, is difficult to describe, and was such as I had never before experienced. I think the others felt something like the same sensation. Fatigue, kept at bay so long as the stern necessity for caution lasted, seemed to come upon us with a rush, though tempered with the sense of freedom from care aforesaid, and I fancy our progress down the glacier snow was for a time rather staggy. Though tired, we were by no means exhausted, and after a short rest on a flat rock and a drink from a glacier runnel, found ourselves sufficiently vigorous to make good use of the remaining daylight to cross the intervening glaciers, moraines, and valley of boulders, before commencing to skirt the tedious and, in the dark, exasperating stony wastes of the Charmoz ridge. Sternly disregarding the allurements of numerous stonemen, which here seem to grow wild, to the confusion of those weak enough to trust them, we stumbled along amongst the stones to the brow of the hill overlooking the hotel, where shouts from friends greeted the appearance of our lantern, and, descending by the footpath, we arrived among them at 10.30 P.M., more than fifty-four hours after our departure on the 12th."



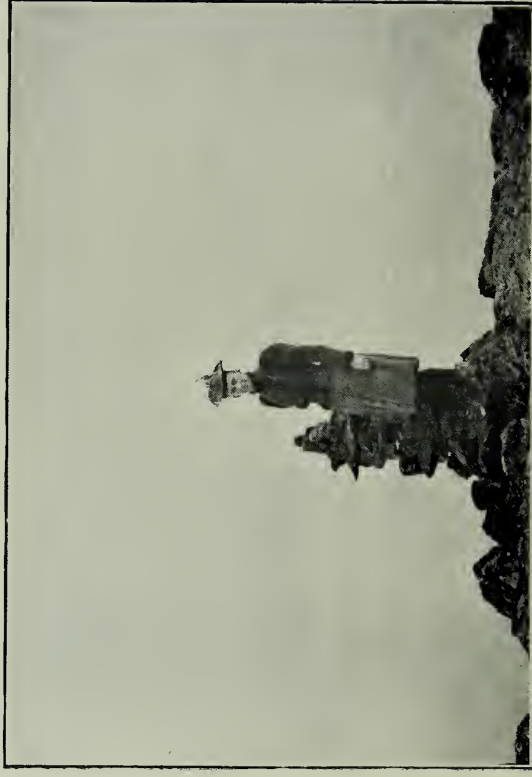
ON A SNOW RIDGE.



MRS. AUBREY LE BLOND, 1903. By Royston Le Blond.
To face p. 51.



A HALT FOR LUNCH ABOVE THE SNOW-LINE.



MRS. AUBREY LE BLOND. By Joseph Imboden.

CHAPTER III

SOME AVALANCHE ADVENTURES

WE should never have got into such a position, but when definite orders are not carried out the General must not be blamed. The adventure might easily have cost all three of us our lives.

This is how we came to be imperilling our necks on an incoherent snow-ridge 13,000 feet above the sea. It was the end of September, and my two guides and I were waiting at Zermatt to try the Dent Blanche, a proceeding which, later on, was amply justified by success. Much fresh snow had recently fallen, and the slopes of the mountains were running down towards the valleys faster than the most active chamois could have galloped up them. Idleness is an abomination to the keen climber, and doubly so if he be an enthusiastic photographer, and the sun shone each day from a cloudless sky. Something had to be done, but what could we choose? All the safe second-class ascents up which one might wade through fresh

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snow without risk, we had accomplished over and over again. Something new to us was what we wanted, and what eventually we found in the stately Hohberghorn. Now this peak is seldom ascended. It is overtopped by two big neighbours, and until these have been done, no one is likely to climb the less imposing peak. Furthermore, the Hohberghorn is a grind, and though we got enough excitement and to spare out of it, yet in our case the circumstances were peculiar. The view was certain to be grand, and, *faute de mieux*, we decided to start for it.

On this occasion, in addition to my guide of many years' standing, the famous Joseph Imboden of St Nicholas, I had a second man, who had a great local reputation in his native valley at the other end of Switzerland (and deservedly so, as far as his actual climbing ability was concerned), but who had never been on a rope with Imboden before. This was the cause of the appalling risk we ran during our expedition. We arrived in good time at the hut, and found another party, who proposed going up the Dom, the highest mountain entirely in Switzerland (14,900 feet) next day. Our way lay together for a couple of hours over the great glacier, and we proceeded the following morning in magnificent weather towards our respective peaks.

It was heavy work ploughing our way through

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the soft new snow, and we could not advance except very slowly. As a result, it was already mid-day when we gained the ridge of the Hohberghorn, not far below the summit. The sun streamed pitilessly down, the snow cracked and slipped at every step. To understand what followed, our position must now be made clear. Imboden, who led, was on the very crest of the ridge. Next to him on the rope, at a distance of about 20 feet, was my place, also on the ridge. At an equal distance behind me was the second guide. He was a trifle below the ridge, on the side to our left. We stood still for a moment, and then Imboden distinctly but very quietly remarked to the other man, "Be on your guard. At any moment now we may expect an avalanche." I never to this day can understand how he failed to grasp what this meant. It should have been obvious that it was a warning to look out, and at the first sign of approaching danger to step down on to the other side of the ridge. Had not this been a perfectly simple thing to do, we should not have continued the ascent, but the second guide failed us hopelessly when the critical moment came. Imboden, to avoid a small cornice or overhanging eave of snow to our right, now took a few steps along and below the ridge to the left, while the man behind me came in the tracks to the crest, and I followed the leader. From

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this position the last man could in an instant have been down the slope to his right, and have held us with the greatest ease.

We advanced a yard or two further, and then the entire surface upon which we stood commenced to move! A moment more and we were struggling for our lives, dashing our axes through the rushing snow, and endeavouring to arrest our wild career, which, unless checked at once, would cause us to be precipitated down the entire face of the mountain, to the glacier below. Then it was that the firm bed of snow beneath the newer layer stood us in good stead. Our axes held, and, breathless, bruised and startled, we found ourselves clinging to the slope, while the avalanche, momentarily increasing in volume, thundered down towards the snow-fields below, where at length, heaped high against the mountain-side, it came to rest.

We now took stock of the position. We were practically unhurt, but so confused and rapid had been the slip that the rope was entangled round us in a manner wonderful to behold. There was nothing to prevent us reaching the summit, for every atom of fresh snow had been swept away from the slope, so we continued our climb, and soon were able to rest on the top. To this day, Imboden and I always look back to our adventure

SOME AVALANCHE ADVENTURES

on the Hohberghorn as the greatest peril either of us has ever faced.

More than one instance has been recorded where, owing to the prompt action of the last man on the rope, fatal accidents on snow-ridges have been avoided. The two most famous occasions in Alpine annals¹ were when Hans Grass saved his party on Piz Palü, and when Ulrich Almer performed his marvellous feat on the Gabelhorn. It is true that in both these cases the risk was due to the breaking away of a snow-cornice, but the remedy was exactly the same as it ought to have been when our avalanche was started.

I have only to add that we found the other party at the hut, much exhausted by their unsuccessful attempt on the Dom, and very anxious on our account, as they both heard and saw the avalanche which had so nearly ended our mountaineering career.

The famous climber, Mr Tuckett, has very kindly allowed me to quote from *Peaks, Passes, and Glaciers*, the following description of a narrow escape from an avalanche while descending the Aletschhorn :

“We had accomplished in safety a distance of scarcely more than 150 yards when, as I was looking at the Jungfrau, my attention was

¹ *True Tales of Mountain Adventure*, pp. 42 and 43.

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attracted by a sudden exclamation from Victor, who appeared to stagger and all but lose his balance. At first, the idea of some sort of seizure or an attack of giddiness presented itself, but, without stopping to enquire, I at once turned round, drove my good 8-foot ash-pole as deeply as possible through the surface layer of fresh snow into the firmer stratum beneath, tightened the rope to give Victor support, and shouted to Peter to do the same. All this was the work of an instant, and a glance at once showed me what had happened. Victor was safe for the moment, but a layer or *couche* of snow, 10 inches to a foot in thickness, had given way exactly beneath his feet, and first gently, and then fleet as an arrow, went gliding down, with that unpleasant sound somewhat resembling the escape of steam, which is so trying to the nerves of the bravest man, when he knows its full and true significance. At first a mass 80 to 100 yards in breadth and 10 or 15 in length alone gave way, but the contagion spread, and ere another minute had elapsed the slopes right and left of us for an extent of at least half a mile, were in movement, and, like a frozen Niagara, went crashing down the ice-precipices and *séracs* that still lay between us and the Aletsch glacier, 1800 to 2000 feet below. The spectacle was indescribably sublime, and the

SOME AVALANCHE ADVENTURES

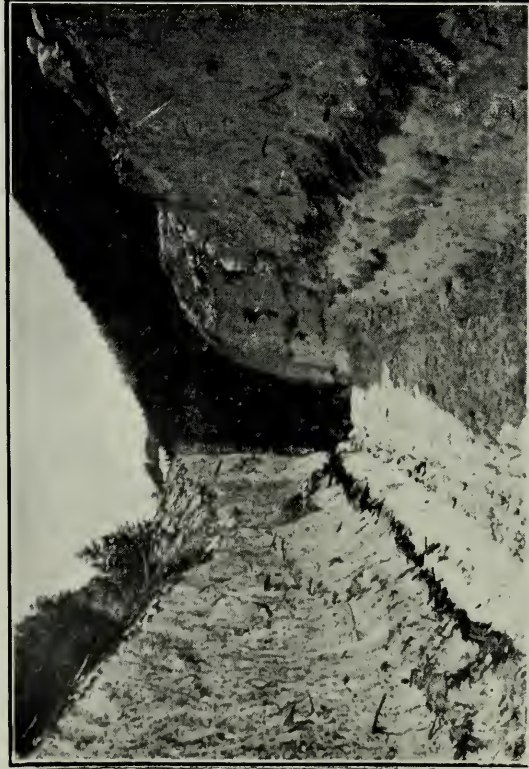
suspense for a moment rather awful, as we were clinging to an incline at least as steep as that on the Grindelwald side of the Strahleck—to name a familiar example—and it was questionable whether escape would be possible, if the layer of snow on the portion of the slope we had just been traversing should give way before we could retrace our steps.

“Not a moment was to be lost; no word was spoken after the first exclamation, and hastily uttered, ‘Au col! et vite!’ and then in dead silence, with *bâtons* held aloft like harpoons, ready to be plunged into the lower and older layers of snow, we stole quietly but rapidly up towards the now friendly-looking *corniche*, and in a few minutes stood once more in safety on the ridge, with feelings of gratitude for our great deliverance, which, though they did not find utterance in words, were, I believe, none the less sincerely felt by all of us. ‘Il n’a manqué que peu à un grand malheur,’ quietly remarked Victor, who looked exhausted, as well he might be after what he had gone through; but a *goutte* of cognac all round soon set us right again, and shouting to Bennen, who was still in sight, though dwindled in size to a mere point, we were soon beside him, running down the *névé* of our old friend, the Aren Glacier. The snow was now soft and the heat

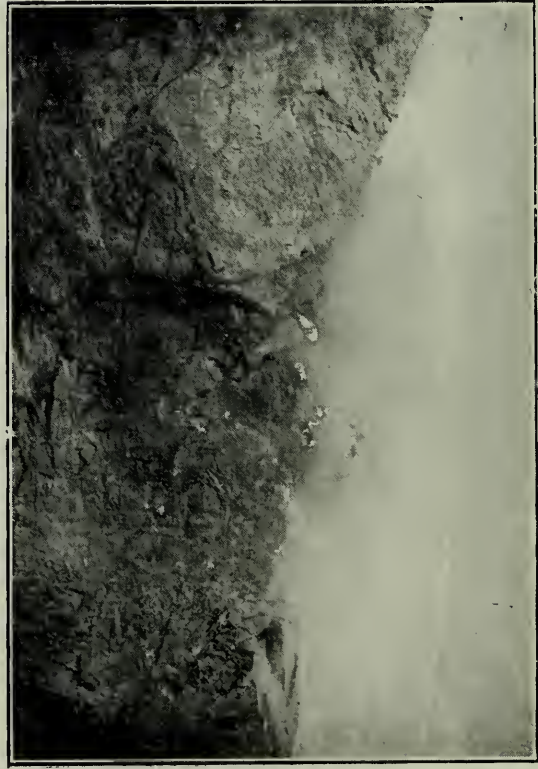
ADVENTURES ON THE ROOF OF THE WORLD

tremendous, and both Bennen and Bohren showed signs of fatigue; but a rapid pace was still maintained in spite of the frequent crevasses. Some were cleared in a series of flying leaps, whilst into others which the snow concealed, one and another would occasionally sink, amid shouts of laughter from his companions, who, in their turn, underwent a similar fate. To the carefully secured rope, which, with the alpenstock and ice axe, are the mountaineer's best friends, we owed it that these sudden immersions were a mere matter of joke; but even the sense of security which it confers does not altogether prevent a 'creepy' sensation from being experienced, as the legs dangle in vacancy, and the sharp metallic ring of the icy fragments is heard as they clatter down into the dark blue depths below."

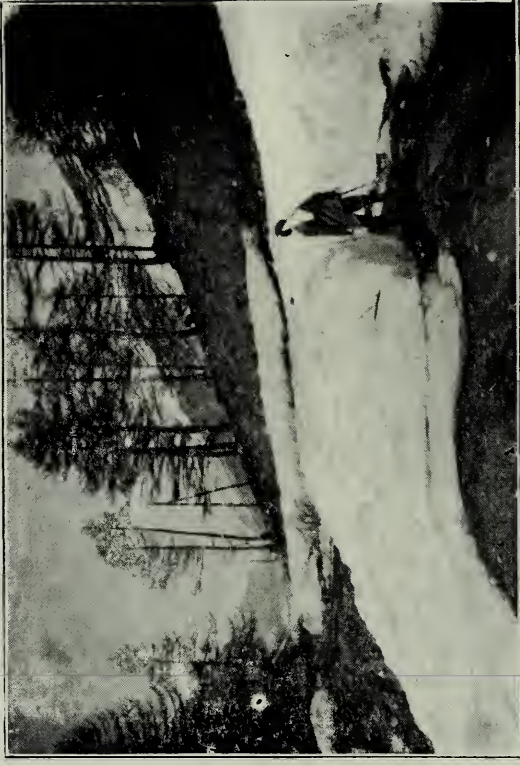
The higher and more snow-laden the mountain chain, the more risk is there from avalanches. It seems practically certain that Mr Mummery met his death in the Himalayas from an avalanche, and that Messrs Donkin and Fox and their two Swiss guides perished in the Caucasus from a like cause. Sir W. Martin Conway, in his book on the Himalayas, makes several allusions to avalanches, and on at least one occasion, some members of his party had a narrow escape. He relates the adventure as follows:



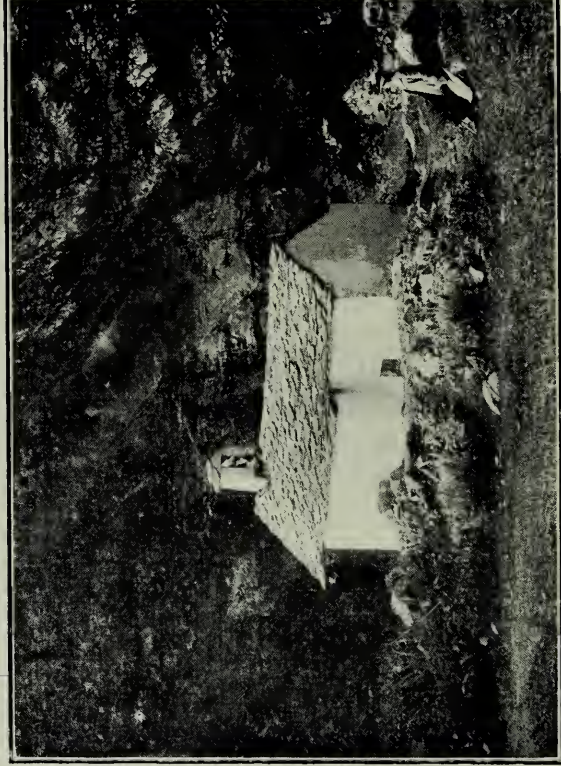
A cutting through an immense avalanche which fell some months previously.



An avalanche of stones.



The remains of a large avalanche.



A mountain chapel near Zermatt where special prayers are offered for defence against avalanches.

SOME AVALANCHE ADVENTURES

"Zurbriggen and I had no more than set foot upon the grass, when we beheld a huge avalanche-cloud descending over the whole width of the ice-fall, utterly enveloping both it and a small rock-rib and couloir beside it. Bruce and the Gurkhas were below the rib, and could only see up the couloir. They thought the avalanche was a small one confined to it, and so they turned back and ran towards the foot of the ice-fall. This was no improvement in position, and there was nothing for them to do then but to run straight away from it, and get as far out to the flat glacier as they could. The fall started from the very top of the Lower Burchi peak, and tumbled on to the plateau above the ice-fall; it flowed over this, and came down the ice-fall itself. We saw the cloud before we heard the noise, and then it only reached us as a distant rumble. We had no means of guessing the amount of solid snow and ice that there might be in the heart of the cloud. The rumble increased in loudness, and was soon a thunder that swallowed up our puny shouts, so that Bruce could not hear our warning. Had he heard he could easily have reached the sheltered position we gained before the cloud came on him. Zurbriggen and I cast ourselves upon our faces, but only the edge of the cloud and an ordinary strong wind reached us. Our companions were entirely enveloped in it.

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They afterwards described to us how they raced away like wild men, jumping crevasses which they could not have cleared in cold blood. When the snow just enveloped them, the wind raised by it cast them headlong on the ice. This, however, was the worst that happened. The snow peppered them all over, and soaked them to the skin, but the solid part of the avalanche was happily arrested in the midst of the ice-fall, and never came in sight. When the fog cleared they were all so out of breath that for some minutes they could only stand and regard one another in panting silence. They presently rejoined us, and we halted for a time on the pleasant grass."

In the olden days, before the great Alpine lines had tunnelled beneath the mountains and made a journey from one side of the range to the other in midwinter as safe and as comfortable as a run from London to Brighton, passengers obliged to cross the Alps in winter or spring were exposed to very real peril from avalanches. Messrs Newnes have courteously allowed me to make a short extract from an article which appeared in one of their publications, and in which is described the adventures of two English ladies who were obliged to return home suddenly from Innsbruck on account of the illness of a near relative. Their shortest route was by *diligence* to Constance, over

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the Arlberg Pass, and although it was considered extremely dangerous at that time of year—the beginning of May 1880—they resolved to make the attempt. Much anxiety with regard to avalanches was felt in neighbouring villages, as the sun had lately been very hot, and the snow had become rotten and undermined. Owing to heavy falls during the previous winter, the accumulation of snow was enormous, and thus the two travellers set out under the worst possible auspices. The conductor of the *diligence* warned them of the danger, and told them on no account to open a window or to make any movement which could shake the coach. He got in with them and sat opposite, looking very worried and anxious. They reached the critical part of their journey, and, to quote Mrs Brewer's words:

“Suddenly a low, booming sound, like that of a cannon on a battlefield or a tremendous peal of thunder, broke on our ears, swelling into a deafening crash; and in a moment we were buried in a vast mass of snow. One of the immense piles from the mountain above had crashed down upon us, carrying everything with it. At the same moment we felt a violent jerk of the coach, and heard a kind of sound which expressed terror; but, happily, our vehicle did not turn over, as it seemed likely to do for a

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minute or so. There we sat—for how long I know not — scarcely able to breathe, the snow pressing heavily against the windows, and utterly blocking out light and air, so that breathing was a painful effort. And now came a curious sensation. It was an utter suspension of thought, and of every mental and physical faculty.

“True, in a sort of unconscious way I became aware that the guard was sobbing out a prayer for his wife and children; but it had not the slightest effect on me.

“We might have been buried days and nights for all I knew, for I kept no count of time. In reality, I believe it was but a couple of hours between the fall of the avalanche and the first moment of hope, which came in the form of men striking with pickaxes. The sound seemed to come from a long distance — almost, as it were, from another world.

“The guard, roused by the noise, said earnestly: ‘Ach Gott! I thank Thee.’ And then, speaking to us, he said: ‘Ladies, help is near!’

“Gradually the sound of the digging and the voices of the men grew nearer, till at length one window was open—the one overlooking the valley; and the life-giving air stole softly in upon us. Even now, however, we were told not to move; not that we had any inclination to do so, for we

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were in a dazed, half-conscious condition. When at length we used our eyes, it was to note that the valley did not seem so deep, and that the villages with their church spires had disappeared; the meaning of it was not far to seek.

"We were both good German scholars, and knew several of the dialects, so that we were able to learn a good deal of what had happened by listening to the men's talk. The school inspector in his terror had lost all self-control, and forgetful of the warnings given him, threw himself off the seat and leaped into space, thereby endangering the safety of all. He mercifully fell into one of the clumps of trees some distance down the slope, and so escaped without very much damage to himself, except shock to the system and bruises. The poor horses, however, fared infinitely worse. The weight of the snow lifted the rings from the hooks on the carriage, and at the same time carried the poor brutes down with it into the valley — never again to do a day's work.

"The difficulties still before us were very serious. We could neither go backward nor forward, and there was danger of more avalanches falling. The next posting village was still far ahead, and there was no chance of our advancing a step until the brave body of men could cut a way through or

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make a clearance, and even then time would be required to bring back horses."

The ladies were at last extricated from their still dangerous position, and amid a scene of the greatest excitement, arrived at a little Tyrolese village. The people could not do enough to welcome them, and every kindness was shown to them. Thus ended a wonderfully narrow escape for all who were concerned in the adventure.



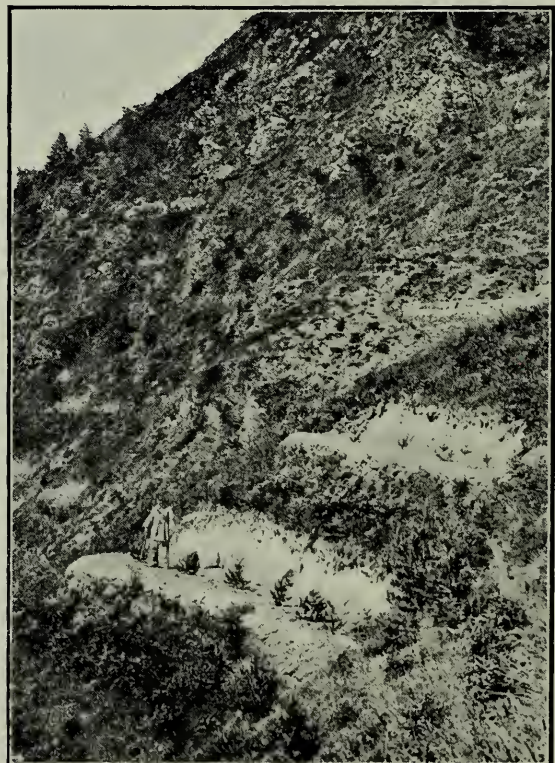
A mountain path.



Peasants of the mountains.



A village completely buried beneath an avalanche.



Terraces cut on the hill sides and planted with trees to prevent the fall of avalanches.

CHAPTER IV

A MONTH BENEATH AN AVALANCHE

ONE of the treasures of collectors of Alpine books is a small volume in Italian by Ignazio Somis. The British Museum has not only a copy of the original, but also a couple of translations, from one of which, published in 1768, I take the following account. I have left the quaint old spelling and punctuation just as they were; they accentuate the vividness and evident truth of this "True and Particular Account of the most Surprising preservation and happy deliverance of three women," who were buried for a month under an avalanche. The occurrence was fully investigated by Ignazio Somis, who visited the village of Bergemoletto, and obtained his narrative from the lips of one of the survivors.

"In the month of February and March of the year 1755, we had in Turin, a great fall of rain, the sky having been almost constantly overcast from the ninth of February till the twenty-fourth of March. During this interval, it rained almost every

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day, but snowed only on the morning of the twenty-first of February, when the liquor of Reaumur's thermometer stood but one degree above the freezing point. Now, as it often snows in the mountains, when it only rains in the plain; it cannot appear surprising that during this interval, there fell vast quantities of snow in the mountains that surround us, and in course, several valancas¹ were formed. In fact, there happened so many in different places on the side of Aosta, Lanzo, Susa, Savoy, and the county of Nice, that by the end of March, no less than two hundred persons had the misfortune of losing their lives by them. Of these overwhelmed by these valancas, three persons, however, Mary Anne Roccia Bruno, Anne Roccia, and Margaret Roccia, had reason to think themselves in other respects, extremely happy, having been dug alive on the twenty-fifth of April, out of a stable, under the ruins of which, they had been buried, the nineteenth of March, about nine in the morning, by a valanca of snow, forty-two feet higher than the roof, to the incredible surprise of all those who saw them, and afterwards heard them relate how they lived all this while, with death, as we may say, continually staring them in the face.

"The road from Demonte to the higher valley of Stura, runs amidst many mountains, which, join-

¹ Or, in modern phraseology, "avalanches."

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ing one another, and sometimes rising to a great height, form a part of those Alps, by historians and geographers, called maritime Alps, separating the valley of Stura and Piedmont, from Dauphiny and the county of Nice. Towards the middle of the road leading to the top of these mountains, and on the left of the river Stura, we meet with a village called Bergemolo, passing through which village, and still keeping the road through the said valley, we, at about a mile distance, arrive at a little hamlet called Bergemoletto, containing about one hundred and fifty souls. From this place there run two narrow lanes, both to the right and left, one less steep and fatiguing than the other, and in some measure along two valleys, to the mountains. The summit of the mountain makes the horizon an angle much greater than 45° , and so much greater in some places, as to be in a manner perpendicular, so that it is a very difficult matter to climb it, even by a winding path. Now it was from the summit of the aforesaid mountains that fell the valancas of snow, which did so much mischief, and almost entirely destroyed the hamlet of Bergemoletto.

“The bad weather which prevailed in so many other places, prevailed likewise in the Foresta of Bergemoletto. By this word Foresta, the Alpineers understand the villages dispersed over the vallies

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covered with small trees and bushes, and surrounded with high mountains; for it began to snow early in March, and the fall increased so much on the 16, 17, 18 and 19, that many of the inhabitants began to apprehend, and not without reason, that the weight of that which was already fallen, and still continued to fall, might crush their houses, built with stones peculiar to the country, cemented by nothing but mud, and a very small portion of lime, and covered with thatch laid on a roof of shingles and large thin stones, supported by thick beams. They, therefore, got upon their roofs to lighten them of the snow. At a little distance from the church, stood the house of Joseph Roccia, a man of about fifty, husband of Mary Anne, born in Demonte, of the family of Bruno; who, with his son James, a lad of fifteen, had, like his neighbours, got upon the roof of his house on the 19th in the morning in order to lessen the weight on it, and thereby prevent its destruction. In the meantime the clergyman who lived in the neighbourhood, and was about leaving home, in order to repair to the church, and gather his people together to hear mass; perceiving a noise towards the top of the mountains, and turning his trembling eyes towards the quarter from whence he thought it came, discovered two valancas driving headlong towards the village. Wherefore raising his voice

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he gave Joseph notice, instantly to come down from the roof, to avoid the impending danger, and then immediately retreated himself into his own house.

“These two valancas met and united, so as to form but one valanca which continued to descend towards the valley, where, on account of the increase of its bulk, the diminution of its velocity and the insensible declivity of the plane it stopped and arrested by the neighbouring mountain, though it covered a large tract of land, did no damage either to the houses or the inhabitants. Joseph Roccia, who had formerly observed that the fall of one valanca was often attended with that of others, immediately came off the roof at the priest’s notice, and with his son fled as hard as he could towards the church, without well knowing, however, which way he went; as is usually the case with the Alpineers, when they guess by the report in the air, that some valanca is falling or seeing it fall with their own eyes. The poor man had scarce advanced forty steps, when hearing his son fall just at his heels, he turned about to assist him, and taking him up, saw the spot on which his house, his stable, and those of some of his neighbours stood, converted into a huge heap of snow, without the least sign of either walls or roofs. Such was his agony at this sight, and at the

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thoughts of having lost in an instant, his wife, his sister, his family, and all the little he had saved, with many years increasing labour and economy, that hale and hearty, as he was, he immediately, as if heaven and earth were come together, lost his senses, swooned away, and tumbled upon the snow. His son now helped him, and he came to himself little by little ; till at last, by leaning upon him, he found himself in a condition to get on the valanca, and, in order to re-establish his health there, set out for the house of his friend, Spirito Roccia, about one hundred feet distant from the spot, where he fell. Mary Anne, his wife, who was standing with her sister-in-law Anne, her daughter Margaret, and her son Anthony, a little boy two years old, at the door of the stable, looking at the people throwing the snow from off the houses, and waiting for the ringing of the bell that was to call them to prayers, was about taking a turn to the house, in order to light a fire, and air a shirt for her husband, who could not but want that refreshment after his hard labour. But before she could set out, she heard the priest cry out to them to come down quickly, and raising her trembling eyes, saw the foresaid valancas set off, and roll down the side of the mountain, and at the same instant heard a horrible report from another quarter, which made her retreat back quickly with her family, and shut

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the door of the stable. Happy it was for her, that she had time to do so ; this noise being occasioned by another immense valanca, the whole cause of all the misery and distress, she had to suffer for so long a time. And it was this very valanca, over which Joseph, her husband was obliged to pass after his fit, in his way to the house of Spirito Roccia.

“Some minutes after the fall of the valanca another huge one broke off driving along the valley and beat down the houses which it met in its course. This valanca increased greatly, by the snow over which it passed, in its headlong course, and soon reached with so much impetuosity, the first fallen valanca, it carried away great part of it ; then returning back with this reinforcement, it demolished the houses, stopping in the valley which it had already overwhelmed in its first progress. So that the height of the snow, Paris measure, amounted to more than seventy-seven feet ; the length of it to more than four hundred and twenty-seven and the breadth above ninety-four. Some people affirm that the concussion of the air occasioned by this valanca, was so great, that it was heard at Bergemolo, and even burst open some doors and windows at that place. This I know that nothing escaped it in Bergemoletto, but a few houses, the church, and the house of John Arnaud.

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“Being therefore gathered together, in order to sum up their misfortunes, the inhabitants first counted thirty houses overwhelmed; and then every one calling over those he knew, twenty-two souls were missing, of which number, was D. Giulio Cesare Emanuel, their parish priest, who had lived among them forty years. The news of this terrible disaster, soon spread itself over the neighbourhood, striking all those who heard it, with grief and compassion. All the friends and relations of the sufferers, and many others, flocked of their own accord, from Bergemolo and Demonte; and many were dispatched by the magistrates of these places, to try if they could give any relief to so many poor creatures, who, perhaps, were already suffocated by the vast heap of snow that lay upon them; so that by the day following, the number assembled on this melancholy occasion amounted to three hundred. Joseph Roccia, notwithstanding his great love for his wife and family, and his desire to recover part of what he had lost, was in no condition to assist them for five days, owing to the great fright and grief, occasioned by so shocking an event, and the swoon which overtook him at the first sight of it. In the meantime, the rest were trying, if, by driving iron-rods through the hardened snow, they could discover any roofs; but they tried in vain. The great solidity and compactness of the valanca, the vast

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extent of it in length, breadth and height, together with the snow, that still continued to fall in great quantities, eluded all their efforts; so that after some days' labour, they thought proper to desist from their trials, finding that it was throwing away their time and trouble to no purpose. The husband of poor Mary Anne, no sooner recovered his strength, than in company with his son, and Anthony and Joseph Bruno, his brothers-in-law who had come to his assistance from Demonte, where they lived, did all that lay in his power to discover the spot, under which his house, and the stable belonging to it, were situated. But neither himself, nor his relations, could make any discovery capable of affording them the smallest ray of comfort; though they worked hard for many days, now in one place, and now in another, unable to give up the thoughts of knowing for certain, whether any of their family was still alive, or if they had under the snow and the ruins of the stable, found, at once, both death and a grave. But it was all labour lost, so that, at length, he thought proper to return to the house of Spirito Roccia, and there wait, till, the weather growing milder, the melting of the snow should give him an opportunity of paying the last duty to his family, and recovering what little of his substance might have escaped this terrible calamity.

“Towards the end of March, the weather, through

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the lengthening of the days, and the setting in of the warm winds, which continued to blow till about the twentieth of April, began to grow mild and warm; and, of course, the great valanca to fall away by the melting of the snow and ice that composed it; so that little by little, the valley began to assume its pristine form. This change was very sensible, especially by the eighteenth of April, so that the time seemed to be at hand for the surviving inhabitants of Bergemoletto to resume their interrupted labours, with some certainty of recovering a good part of what they had lost on the unfortunately memorable morning of the nineteenth of March. Accordingly, they dispersed themselves over the valanca, some trying in one place, and some in another, now with long spades, and another time with thick rods of iron, and other instruments proper to break the indurated snow. One of the first houses they discovered by this means, was that of Louisa Roccia, in which they found her dead body, and that of one of her sons. Next day, in the house called the confreria, that had two rooms on the ground floor, and one above them, they found the body of D. Giulio Cesare Emanuel, with his beads in his hand. Joseph Roccia, animated by these discoveries, set himself with new spirits about discovering the situation of his house, and the stable belonging to it; and with spades and iron crows, made several and deep holes in the snow,

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throwing great quantities of earth into them ; earth mixed with water, being very powerful in destroying the strong cohesion of snow and ice. On the twenty-fourth, having made himself an opening two feet deep into the valanca, he began to find the snow softer and less difficult to penetrate ; wherefore, driving down a long stick, he had the good fortune of touching the ground with it.

“It was no small addition to Joseph’s strength and spirit, to be thus able to reach the bottom ; so that he would have joyfully continued his labour, and might perhaps on that very day, had it not been too far advanced, have recovered some part of what he was looking for, and found that which, assuredly, he by no means expected to meet with. When, therefore, he desisted for that time, it was with much greater reluctance than he had done any of the preceding days. The anxiety of Joseph, during the following night, may well be compared to that of the weather-beaten mariner, who finding himself, after a long voyage, at the mouth of his desired port, is yet, by the coming on of night obliged to remain on the inconstant waves till next morning. Wherefore, at the first gleam of light, he, with his son, hastened back to the spot, where the preceding day he had reached the ground with the stick, and began to work upon it again ; but he had not worked long, when lo, to his great

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surprise, who should he see coming to his assistance but his two brothers-in-law Joseph and Anthony Bruno.

"Anthony, it seems, the night between the preceding Thursday and Friday, being then in Delmonte, dreamed that there appeared to him, with a pale and troubled countenance, his sister Mary Anne Roccia, who, with an earnestness intermixed with grief and hope, called upon him for assistance in the following words :

"'Anthony, though you all look upon me as 'dead in the stable where the valanca of snow overwhelmed me on the nineteenth of March, God has 'kept me alive. Hasten therefore to my assistance, 'and to relieve me from my present wretched condition ; in you, my brother, have I placed all my 'hopes, dont abandon me ; help, help I beseech you.' Anthony's imagination, was so affected by the thoughts of thus seeing his sister, and hearing her utter these piteous words, that he immediately started up, and calling out to his brother Joseph, he acquainted him with what he had seen and heard. They both, therefore, as soon as it was day, set out for Bergemoletto, where they arrived a little before eight, tired and out of breath, for they seemed to have their sister continually before their eyes, pressing them for help and assistance. Having therefore taken a little rest and refresh-

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ment, they set out again for the place, where Joseph Roccia, and many others, were hard at work in looking for the wrecks of their houses. Joseph had left the spot, where, the day before he thought he had reached the ground, and was trying to reach it in other places. His brothers-in-law immediately fell to work with him, and making many new holes in the snow, the interior parts of which were not so very hard, with the same iron rods, with earth and with long poles, they at last, about ten, discovered the so long sought for house, but found no dead bodies in it. Knowing that the stable did not lie one hundred feet from the house, they immediately directed their search towards it, and proceeding in the same manner, about noon, they got a long pole through a hole, from whence issued a hoarse and languid voice, which seemed to say: 'help, my 'dear husband, help, my dear brother, help.' The husband and brother thunderstruck, and at the same time encouraged by these words, fell to their work with redoubled ardour, in order to clear away the snow, and open a sufficient way for themselves, to the place from whence the voice came, and which grew more and more distinct as the work advanced. It was not long, therefore, before they had made a pretty large opening, through which (none minding the danger he

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exposed himself to) Anthony descended, as into a dark pit, asking who it was, that could be alive in such a place. Mary Anne knew him by his voice, and answered with a trembling and broken accent, intermixed with tears of joy. 'Tis I, my 'dear brother, who am still alive in company with 'my daughter and my sister-in-law, who are at my 'elbow. God, in whom I have always trusted, still 'hoping that he would inspire you with the thought 'of coming to our assistance, has been graciously 'pleased to keep us alive.' God, who had preserved them to this moment, and was willing they should live, inspired Anthony with such strength and spirits, that, notwithstanding the surprise and tenderness with which so joyful and at the same time so sad a sight must have affected him, had presence of mind enough to acquaint his fellow-labourers, all anxiously waiting for the report of his success, that Mary Anne, Margaret, and Anne Roccia were still alive. Whereupon Joseph Roccia, and Joseph Bruno, enlarging the passage as well as they could, immediately followed him into the ruins; whilst the other Alpineers, scattered over the valanca in quest of their lost substance, and the dead bodies of their relations, on the son's calling out to them, flocked round the mouth of the pit, to behold so extraordinary a sight; not a little heightened by that of two live goats scampering out of

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the opening. In the meantime, those who had descended into the hole, were contriving how to take out of it the poor and more than half dead prisoners, and convey them to some place, where they might recover themselves. The first thing they did was to raise them up, and take them out of the manger in which they had been so long stowed. They then placed them one by one on their shoulders, and lifted them up to those who stood round the mouth of the pit, who with very great difficulty took hold of them by the arms, and drew them out of their dark habitation. Mary Anne, on being exposed to the open air, and seeing the light, was attacked by a very acute pain in the eyes, which greatly weakened her sight, and was attended with so violent a fainting fit, that she had almost like to have lost, in the first moment of her deliverance, that life, which she had so long and with such difficulty preserved. But this was a consequence that might be easily foreseen. She had been thirty-seven days, secluded, in a manner entirely, from the open air; nor had the least ray of light, in all that time, penetrated her pupils.

“Her son found means to bring her to herself with a little melted snow, there being nothing else at hand fit for the purpose, and the accident that happened her was improved into a rule for treating the com-

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panions of her misfortune. They, therefore, covered all their faces, and wrapped them up so well, as to leave them but just room to breathe, and in this condition took them to the house of John Arnaud, where Mary Anne was entirely recovered from her fit, by a little generous wine. They then directly placed them in some little beds put up in the stable, which was moderately warm, and almost entirely without light, and prepared for them a mess of rye meal gruel, mixed with a little butter; but they could swallow but very little of it."

CHAPTER V

A MONTH BENEATH AN AVALANCHE—(*continued*)

“IT is now proper I should say something of the most marvellous circumstance, attending this very singular and surprising accident, I mean their manner of supporting life, during so long and close a confinement. I shall relate what I have heard of it from their own mouths, being the same, in substance, with what Count Nicholas de Brandizzo, intendant of the city and province of Cuneo, heard from them on the sixteenth of May, when, by order of our most benevolent sovereign, he repaired to Bergemoletto, effectually to relieve these poor women, and the rest of the inhabitants, who had suffered by the valanca.

“To begin then; on the morning of the twenty-ninth of March, our three poor women, expecting every minute to hear the bell toll for prayers, had in the mean time, taken shelter from the rigour of the weather, in a stable built with stones, such as are usually found in these quarters, with a roof composed of large thin stones, not unlike slate, laid on a beam ten

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inches square, and covered with a small quantity of straw, and with a pitch sufficient to carry off the rain, hail or snow, that might fall upon it. In the same stable were six goats, (four of which I heard nothing of) an ass and some hens. Adjoining to this stable, was a little room, in which they had fixed a bed, and used to lay up some provisions, in order to sleep in it in bad weather without being obliged to go for anything to the dwelling-house, which lay about one hundred feet from it. I have already taken notice, that Mary Anne was looking from the door of the stable at her husband and son, who were clearing the roof of its snow, when warned by a horrible noise, the signal by which the Alpineer knows the tumbling of the valancas, she immediately took herself in with her sister-in-law, her daughter, and her little boy of two years old, and shut the door, telling them the reason for doing it in such a hurry. Soon after they heard a great part of the roof give way, and some stones fall on the ground, and found themselves involved on all sides with a pitchy darkness ; all which they attributed, and with good reason, to the fall of some valanca. Upon this, they for some time thought proper to keep a profound silence, to try if they could hear any noise, and by that means have the comfort of knowing that help was at hand, but they could hear nothing. They therefore set themselves to grope about the stable, but without being

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able to meet with anything but solid snow, Anne light upon the door, and opened it, hoping she had found out the way to escape the imminent danger they thought they were in of the buildings tumbling about their ears; but she could not distinguish the least ray of light, nor feel any thing but a hard and impenetrable wall of snow, with which she acquainted her fellow prisoners. They, therefore, immediately began to bawl out with all their might; 'help, help, we are still alive'; repeating it several times; but not hearing any answer, Anne put the door to again. They continued to grope about the stable, and Mary Anne having light upon the manger, it occurred to her, that, as it was full of hay, they might take up their quarters there, and enjoy some repose, till it should please the Almighty to send them assistance. The manger was about twenty inches broad, and lay along a wall, which, by being on one side supported by an arch, was enabled to withstand the shock, and upheld the chief beam of the roof, in such a manner, as to prevent the poor women from being crushed to pieces by the ruins. Mary Anne placed herself in the manger, putting her son by her, and then advised her daughter and her sister-in-law to do so too. Upon this, the ass which was tied to the manger, frightened by the noise, began to bray and prance at a great rate; so that, fearing lest he should bring the parapet of the manger, or

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even the wall itself about their ears ; they immediately untied the halter, and turned him adrift. In going from the manger, he stumbled upon a kettle that happened to lie in the middle of the stable, which put Mary Anne upon picking it up, and laying it by her, as it might serve to melt the snow in for their drink, in case they should happen to be confined long enough to want that resource. Anne, approving this thought, got down, and groping on the floor till she had found it, came back to the manger.

“ In this situation the good women continued many hours, every moment expecting to be relieved from it ; but, at last, being too well convinced, that they had no immediate relief to expect, they began to consider how they might support life, and what provisions they had with them for that purpose. Anne recollected that the day before she had put some chestnuts into her pocket, but, on counting them, found they amounted only to fifteen. Their chief hopes, therefore, and with great reason now rested on thirty or forty cakes, which two days before had been laid up in the adjoining room. The reader may well imagine, though Anne had never told me a word of it, with what speed and alertness she must, on recollecting these cakes, have got out of the manger, to see and find out the door of the room where they lay ; but it was to no purpose ; she roved and roved about the stable

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to find out what she wanted, so that she was obliged to come as she went, and take up her seat again amongst her fellow-sufferers, who still comforted themselves with the hopes of being speedily delivered from that dark and narrow prison. In the mean while, finding their appetite return, they had recourse to their chestnuts. The rest of the chestnuts they reserved for a future occasion. They then addressed themselves to God, humbly beseeching him to take compassion on them, and vouchsafe in his great mercy to rescue them from their dark grave, and from the great miseries they must unavoidably suffer, in case it did not please him to send them immediate assistance. They spent many hours in ejaculations of this kind, and then thinking it must be night, they endeavoured to compose themselves. Margaret and the little boy, whose tender years prevented their having any idea of what they had to suffer in their wretched situation, or any thought of death, and of what they must suffer, before they could be relieved, fell asleep. But it was otherwise with Mary Anne and Anne, who could not get the least rest, and spent the whole night in prayer, or in speaking of their wretched condition, and comforting one another with the hopes of being speedily delivered from it. As it seemed to them, after many hours, that it was day again, they endeavoured to keep up their

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spirits with the thoughts, that Joseph with the rest of their friends and relations not getting any intelligence of their situation, would not fail of doing all that lay in their power to come at them. The sensation of hunger was earliest felt by the two youngest; and the little boy crying out for something to eat, and there being nothing for him but the chestnuts, Anne gave him three.

“I said, that these women seemed to have some notion of the approach of day and night, but I should never have dreamed in what manner this idea could be excited in them, shut up as they were in a body of ice, impervious to the least ray of light, had not they themselves related it to me. The hens shut up in the same prison, were it seems the clocks, which by their clucking all together, made them think the first day that it was night, and then again after some interval that it was day again. This is all the notion they had of day and night for two weeks together; after which, not hearing the hens make any more noise, they no longer knew when it was day or night.

“This day the poor women and the boy supported themselves with their chestnuts; and at the return of the usual signal of night, the boy and Margaret went to sleep; while the mother and aunt spent it in conversation and prayer. On the next day the ass by his braying, gave now and then, for the

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last time, some signs of life. On the other hand, the poor prisoners had something to comfort themselves with; for they discovered two goats making up to the manger. This, therefore, was a joyful event, and they gave the goats some of the hay they sat upon in the manger, shrunk up with their knees to their noses. It then came into Anne's head to try if she could not get some milk from the milch goat; and recollecting that they used to keep a porringer under the manger for that purpose, she immediately got down to look for it, and happily found it. The goat suffered herself to be milked, and yielded almost enough to fill the cup which contained above a pint. On this they lived the third day. The night following the boy and the girl slept as usual, while neither of the two others closed their eyes. Who can imagine how long the time must have appeared to them, and how impatient they must have been to see an end to their sufferings? This, after offering their prayers to the Almighty, was the constant subject of their conversation. 'O, my husband,' Mary Anne used to cry out, 'if you two are not buried 'under some of the valancas and dead; why do 'not you make haste to give me, your sister, and 'children, that assistance which we so much stand 'in need of? We are thank God, still alive, but 'cannot hold out much longer, so it will soon be too

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'late to think of us.' 'Ah, my dear brother,' added Anne, 'in you next to God, have we placed all our trust. We are alive, indeed, and it depends upon you to preserve our lives, by digging us out of the snow and the ruins, in which we lie buried.' 'But let us still hope,' both of them added, 'that as God has been pleased to spare our lives, and provide us with the means of prolonging it, he will still in his great mercy put it into the hearts of our friends and relations to use all their endeavours to save us.' To this discourse succeeded new prayers, after which they composed themselves as well as they could, in order to get, if possible, a little sleep.

"The hens having given the usual signal of the return of day, they began again to think on the means of spinning out their lives. Mary Anne bethought herself anew of the cakes put up in the adjacent room; and upon which, could they but get at them, they might subsist a great while without any other nourishment. On the first day of their confinement, they had found in the manger a pitch fork, which they knew used to be employed in cleaning out the stable, and drawing down hay through a large hole in the hay-loft, which lay over the vault. Anne observed, that such an instrument might be of service in breaking the snow, and getting at the cakes, could they but recover the door leading into the little room.

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She, therefore, immediately got out of the manger, from which she had not stirred since the first day, and groping about, sometimes meeting with nothing but snow, sometimes with the wall, and sometimes loose stones, she, at length, light upon a door, which she took for the stable door, and endeavoured to open it as she had done the first day, but without success; an evident sign that the superincumbent snow had acquired a greater degree of density, and pressed more forcibly against it. She, therefore, made step by step, the best of her way back to the manger, all the time conversing with her fellow-sufferers; and taking the fork with her, continued to rove and grope about, till at last she light upon a smooth and broad piece of wood, which to the touch had so much the appearance of the little door, as to make her hope she had at last found what she had been so earnestly looking for. She then endeavoured to open it with her hand, but finding it impossible, told the rest that she had a mind to employ the pitch fork; but Mary Anne dissuaded her from doing so. 'Let us,' said she, 'leave the cakes where they are a little longer, and 'not endanger our lives any further, by endeavouring 'to preserve them. Who knows but with the fork, 'you might make such destruction, as to bring down 'upon our heads, that part of the stable that still continues together, and which, in its fall, could not fail 'of crushing us to pieces. No, God keep us from that

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'misfortune. Lay down your fork Anne, and come back to us, submitting yourself to the holy will of the Almighty, and patiently accept at his hands whatever he may please to send us.' Anne, moved by such sound and affecting arguments and reasons, immediately let the fork fall out of her hands, and returned to the manger. 'Let us,' continued Mary Anne, 'let us make as much as we can of our nursing goats, and endeavour to keep them alive by supplying them with hay. Here is a good deal in the manger, and it occurs to me, that when that is gone, we may supply them from another quarter, for by putting up my hand, trying what was above me, I have discovered that there is hay in the loft, and that the hole to it is open, and just over our heads; so that we have nothing to do, but to pull it down for the goats, whose milk we may subsist upon, till it shall please God to dispose otherwise of us.'

This reasoning was not only sound in itself, but supported by facts; for ever since their confinement, they had heard stones fall from time to time upon the ground, and these stones could be no others than those of the building, which the shock of the valanca had first loosened, and which the weight it every day acquired by encreasing in density, afterwards enabled it to displace. Wherefore, had she happened to disturb with the pitch-fork, as there was the greatest reason to fear she might, any of those parts, which,

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united together, served to keep up the beam that supported the great body of snow, under which they lay buried, the fall of the stable, and their own destruction, must have infallibly been the consequence of it.

"This day the sensation of hunger was more and more lively and troublesome, without their having anything to allay it with but snow, and the milk yielded them by one of the goats their fellow prisoners. I say one of the goats for as yet they had milked but one of them, thinking it would be useless, or rather hurtful, even if they could, to take any milk from that in kid. Anne had recourse to the other, and in the whole day, got from her about two pints of milk, on which, with the addition of a little snow, they subsisted."

The little boy, unable to struggle against the terrible conditions, grew rapidly weaker and weaker, and the time had now come when he passed painlessly away.

"The death of this poor child proved the severest trial that the three women, the two eldest especially, had to suffer during their long confinement; and from this unfortunate day, the fear of death, which they considered as at no great distance, began to haunt them more and more. The little nourishment, which the goat yielded the poor women, had made them suffer greatly on the preceding days; they

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were, besides, benumbed, or rather frozen with the intense cold. Add to this the necessary, but inconvenient and tormenting posture of their feet, knees, and every other part of their bodies; the snow, which melting over their heads, perpetually trickled down their backs, so that their clothes, and their whole bodies were perfectly drenched with it: they were often on the point of swooning away, and obliged to keep themselves from fainting, by handling the snow, and putting some of it into their mouths; the thirst with which their mouths were constantly burnt up; the thoughts, that in all this time no one had been at the pains to look for and relieve them; the consideration, that all they had hitherto suffered, was nothing in comparison of what they had still to suffer before they could recover their liberty, or sink under the weight of all the evils which encompassed them; all these, certainly, were circumstances sufficient to render them to the last degree, wretched and miserable. Add to this, that the milk of their fond and loving nurse, fell away little by little, till at length, instead of about two pints, which she, in the beginning used to yield, they could not now get so much as a pint from her. The hay that lay in the manger was all out, and it was but little the poor women could draw out of the hole which lay above them; so that as the goats had but little

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fodder, little sustenance could be expected from that which they thought proper to milk. These animals were become so tame and familiar, in consequence of the fondness shewn them, that they always came on the first call to the person that was to milk them, affectionately licking her face and hands. Anne, encouraged by this tameness of theirs, bethought herself of accustoming them to leap upon the manger, and from thence upon her shoulders, so as to reach the hole of the hay-loft, and feed themselves; so apt is hard necessity to inspire strength and ingenuity. She began by the goat that yielded them milk, helping her up into the manger, and then putting her upon her shoulders. This had the desired effect, the animal being thereby enabled to reach much further with its head, than they could with their hands. They did then the same by the other goat, from whom, as soon as she should drop her kid, they expected new relief. She, too, in the same manner, found means to get at the hay, which afforded the poor women some relief in the midst of their pressing necessity. After this day, the goats required no further assistance, they so soon learned to leap of themselves on the manger, and from thence on the women's shoulders. But we must not conclude that hunger was the chief of the poor women's sufferings; far from it. After the first days, during

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which it proved a sore torment to them, they through necessity, grew so accustomed to very little and very light nourishment, that they no longer felt any sensation of that kind, but lived contentedly on the small quantity of milk they could get from their goat, mixed with a little snow. Their breath was what gave them most uneasiness ; for it began to be very difficult on the fifth or sixth day, every inspiration being attended with the sensation of a very heavy and almost insupportable load upon them.

“They now had lost all means of guessing at the returns of night and day, and their only employment was to recommend themselves fervently to God, beseeching him to take compassion of them, and at length, put an end to their miseries, which increased from day to day. At last, their nurse growing dry, they found themselves without any milk, and obliged to live upon snow alone for two or three days, Mary Anne not approving an expedient proposed by her sister. This was to endeavour to find the carcasses of the hens ; for as they had not heard them for some days past, they had sufficient reason to think they were dead ; and then eat them, as the only thing with which they could prolong life. But Mary Anne, rightly judging that it would be almost impossible to strip them clean of their feathers, and that

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besides, the flesh might be so far putrified, as to do them more harm than good, thought proper to dissuade her sister from having recourse to this expedient. But the unspeakable providence of God, whose will it was that they should live, provided them with new means of subsistence, when least they expected it, by the kidding of the other goat. By this event, they judged themselves to be about the middle of April; wherefore, after offering God their most humble thanks, for having preserved them so long, in the midst of so many, and such great difficulties they again beseeched him to assist them effectually, till they could find an opportunity of escaping their doleful prison, and see an end to their great sufferings. Their hopes of this their humble supplication being heard, were raised on the appearance of this new supply, and on their reflecting that the snow begins to thaw in April, in consequence of which that about the stable would soon dissolve enough to let some ray of light break in upon them. Mary Anne told me, that, though she was thoroughly sensible of the badness of her condition, in which it was impossible for her to hold out much longer, and saw it every day grow worse and worse; she never, however, despaired of her living to be delivered. For my part, I cannot sufficiently admire the courage and intrepidity of Anne, who

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told me, that in all this time she never let a tear escape her but once. This was on its occurring to her, that, as they must at length perish for want, it might fall to her lot to die last. For the thought of finding herself amidst the dead bodies of her sister and her niece, herself too in a dying condition, terrified and afflicted her to such a degree, that she could no longer command her tears, but wept bitterly.

“I observed, that the goat had kidded. This event afforded the poor women a new supply of milk, Anne for a while getting two porringers at a time from her, with which they recruited themselves a little. But as the goats began to fall short of hay, the milk of the only one that gave them any, began to lessen in proportion, so that at length they saw themselves reduced to a single, and even half a porringer. It was, therefore, happy for them, that the time drew nigh, in which God had purposed to rescue them from their horrible prison and confinement, and put an end to their sufferings. One time they thought they could hear a noise of some continuance at no great distance from them. This was probably the 20th, when the parish priest's body was found. And, upon it, they all together raised their weak and hoarse voices, crying out, ‘Help, help!’ but the noise ceased, and they this time neither saw nor heard anything else that might serve as a token of their deliverance being at hand.

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However, this noise alone was sufficient to make them address God with greater fervour than ever, beseeching him to have compassion on them, and to confirm them still more and more in their warm hopes, that the end of their long misery was not far off. In fact, they again heard another noise, and that nearer them, as though something had fallen to the ground. On this they again raised their voices, and again cried out, 'Help, help': but no one answered, and soon after the noise itself entirely ceased. Their opinion concerning this noise, and in this they certainly were not mistaken, was that it came from the people, who were at work to find them, and who left off at the approach of night, and went home with a design to return to their labour the next morning. After the noise of the body fallen to the ground in their neighbourhood, they seemed for the first time to perceive some glimpse of light. The appearance of it scared Anne and Margaret to the last degree, as they took it for a sure fore-runner of death, and thought it was occasioned by the dead bodies; for it is a common opinion with the peasants that those wandering wild-fires, which one frequently sees in the open country, are a sure presage of death to the persons constantly attended by them, which ever way they turn themselves; and they accordingly call them death fires. But Mary Anne, was very far from

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giving in to so silly a notion. On the contrary the light inspired her with new courage, and she did all that lay in her power to dissipate the fears of her sister and daughter, revive their hopes in God, and persuade them that their deliverance and the end of all their sufferings was at hand; insisting that this light could be no other than the light of heaven, which had, at last, reached the stable, in consequence of the valanca's melting, and still more in consequence of the constant boring and digging into it by their relations, in order to come at their dead bodies. Mary Anne guessed right for it was the next day that Anthony descended into the ruins of the stable, and to his unspeakable surprise found the poor women alive, blessing and exalting the most high, and restored them from darkness to light, from danger to security, from death to life, by drawing them out of the manger, and removing them to the house of Joseph Arnaud, where they continued to the end of July.

"Thirty-seven entire days did these poor women live in the most horrible sufferings occasioned no less by filth and the disagreeable posture they were confined to, than by cold and hunger; but the Lord was with them. He kept them alive, and they are still living, in a new cottage built the same year in the Foresta of Bergemoletto, at no great distance from their former habitation."

CHAPTER VI

AN EXCITING CAUCASIAN ASCENT

THE following account of the ascent of Gestola, in the Central Caucasus, is taken from *The Alpine Journal*, and the author, Mr C. T. Dent, has most kindly revised it for this work, and has added a note as follows :

“At the time (1886) when this expedition was made, the topography of the district was very imperfectly understood. The mountain climbed was originally described as Tetnuld Tau—Tau = Mountain. Since the publication of the original paper a new survey of the whole district has been carried out by the Russian Government and the nomenclature much altered. The peak of Tetnuld is really to the south of Gestola. The nomenclature has in the following extract been altered so as to correspond with that at present in use and officially sanctioned.”

The party consisted of Mr Dent, the late Mr W. F. Donkin, and two Swiss guides. They had safely accomplished the first part of their ascent of a hitherto unclimbed peak, and were on the ridge

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and face to face with the problem of how to reach the highest point. After describing the glorious scenery which lay around them, Mr Dent writes :

“Woven in between all these peaks lay a wilderness of crevassed slopes, jagged rock ridges, and stretching glaciers, bewildering in their beauty and complexity. To see the wondrous sights that were crowded into those few minutes while we remained on the ridge, we would willingly have gone five times further and fared ten times worse. In high spirits we turned to the left (S.S.E.), and began our journey along the ridge which was to lead us to Gestola, ever keeping an eye on the snowy form of Tetnuld, and marvelling whether it would overtop our peak or not. For a few steps, and for a few only, all went well. The snow was in good order on the ridge, but we had to leave this almost immediately and make S.W. in order to skirt the heights which still intervened between us and our peak. The ice began to change its character. Two or three steps were cut with a few strokes of the axe, and then all went well again for a time. Then more steps, and a more ringing sound as the axe fell. We seemed, too, however we might press on, to make no impression on this first slope. Our doubt returned ; the leader paused, drew up the rope, and bit at a fragment of ice as he gazed anxiously upwards over the face. No ! we were on the right track, and must stick to it if we would

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succeed. For an hour and a quarter we kept at it in silence, save for the constant ringing blows of the axe. Our courage gradually oozed out, for when we had worked back to the ridge again, we seemed to have made no progress at all. The top of the mountain far above was already swathed in cloud, and a distant storm on the south side was only too obvious. Another little peak was won before we looked about again, but the summit seemed no nearer. The exertion had begun to tell and the pace became slower. Some one remarked that he felt hungry, and we all thereupon realised our empty state, so we fortified ourselves for further efforts on a dainty repast of steinbock, black bread a week old, and water—invigorating victuals and exhilarating drink, rather appropriate to the treadmill kind of exercise demanded. It is under conditions such as these that strange diet tells on the climber; but even more trying and more weakening than the poor quality of the food was the want of sleep from which we had suffered for a good many nights. In the language of science, our vital force and nervous energy were becoming rather rapidly exhausted, or, to put it more colloquially and briefly, we were awfully done. Three hours more at least was the estimate, and meanwhile the weather was growing worse and worse. Reflecting that all points fall to him who knows how to wait and stick to it, we

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pressed on harder to escape from the dispiriting thoughts that suggested themselves, and almost of a sudden recognised that the last of the deceptive little tops had been left behind us, and that we were fighting our way up the final peak. Better still, Tetnuld, which for so long had seemed to tower above us, was fast sinking in importance, and there really seemed now, as we measured the peak with the clinometer between the intervals of step-cutting, to be little difference between the two points. The air was so warm and oppressive that we were able to dispense with gloves. One of the guides suffered from intense headache, but the rest of us, I fancy, felt only in much the same condition as a man does at the finish of a hard-run mile race. The clouds parted above us for a while, mysteriously, as it seemed, for there was no wind to move them; but we could only see the slope stretching upwards, and still upwards. Yet we could not be far off now. Again we halted for a few seconds, and as we glanced above, we mentally took stock of our strength, for there was no question the pleasure had been laborious. Some one moved, and we were all ready on the instant. To it once more, and to the very last victory was doubtful. True, the summit had seemed close enough when the last break in the swirling clouds had enabled us to catch a glimpse of what still towered above; but our experience of

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Swiss snow mountains was long enough to make us sceptical as to apparent tops, and possibly the Caucasian giants were as prone to deceive as the human pigmies that crawled and burrowed at their bases.

“Still anxious, still questioning success, we stepped on, and the pace increased as the doubt persisted. It is often said to be impossible, by those who don't try, to explain why the second ascent of a mountain always appears so much easier than the first; some explanation may be found in the fact that on a virgin peak the uncertainty is really increasing during the whole time, and the climax comes in the last few seconds. Every step upwards make success more probable, and at the same time, would make failure more disappointing. In fact, the only periods when we are morally certain of success on a new expedition are before the start and when victory is actually won. Still, we could hardly believe that any insuperable obstacle would now turn us back; yet all was new and uncertain, and the conditions of weather intensified the anxiety. The heavy stillness of the air seemed unnatural, and made the mind work quicker. The sensibility became so acute that if we ceased working and moving for a moment the silence around was unendurable, and seemed to seize hold of us. A distant roll of thunder came almost as a relief. A step or two had to be cut, and the delay appeared interminable.

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Suddenly, a glimpse of a dark patch of rocks appeared above looming through the mist. The slope of the ridge became more gentle for a few yards. Our attention was all fixed above, and we ascended some distance without noticing the change. Another short rise, and we were walking quickly along the ridge. We stopped suddenly; the rocks we had seen so recently, had sunk below us on our left, while in front the *arête* could be followed with the eye, sloping away gradually for a few yards, and then plunging sharply down to a great depth. It was all over; through fair weather and through foul we had succeeded; and there was yet another peak to the credit of the Alpine Club.

"It was not a time for words. Burgener turned to us and touched the snow with his hand, and we sat down in silence. Almost on the instant as we took our places a great burst of thunder rolled and echoed around—a grim salvo of Nature's artillery. The sudden sense of rest heightened the effect of the oppressive stillness that followed. Never have I felt the sense of isolation so complete. Gazing in front into the thin mists, the very presence of my companions seemed an unreality. The veil of wreathing vapour screened the huge panorama of the ice-world from our sight. The black thunder-clouds drifting sullenly shut out the world below. No man knew where we were; we had reached our



A TYPICAL CAUCASIAN LANDSCAPE.

By Signor Vittorio Sella.

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furthest point in a strange land. We were alone with Nature, far from home, and far from all that we were familiar with. Strange emotions thrilled the frame and quickened the pulse. Weird thoughts crowded through the mind—it was not a time for words. Believe me, under such conditions a man will see further across the threshold of the unknown than all the book-reading or psychological speculation in the world will ever reveal to him.

“Coming back to considerations more prosaic and practical, we found that it was 1.15 P.M. We realised, too, that the ascent had been very laborious and exhausting, while there was no doubt that evil times were in store for us. There were no rocks at hand to build a cairn, but we reflected that the snow was soft, and that our footsteps would easily be seen on the morrow. The aneroid marked the height we had attained as 16,550 feet.¹ A momentary break in the mist gave us a view of Dych Tau, and we had just time to get a compass observation. After a stay of fifteen minutes we rose and girded ourselves for the descent. I think we all felt that the chief difficulty was yet to come, but we had little idea of what was actually to follow. Directly after we had left the summit a few puffs of wind

¹ Mountain aneroids generally overstate the heights. The height of Gestola is now computed at 15,932 feet, and that of Tetnuld at 15,918 feet.

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began to play around and some light snow fell. Still, it was not very cold, and if the storm would only keep its distance all might be well. Down the first slope we made our way rapidly enough, and could have gone faster had we not deemed it wise to husband our strength as much as possible. In an hour and twenty minutes we reached the place where we had left the provisions and the camera. The feast was spread, but did not find favour. Never did food look so revolting. The bread seemed to have turned absolutely black, while the steinbock meat looked unfit to keep company with garbage in a gutter; so we packed it up again at once, more from a desire to hide it from our eyes than from any idea that it might look more appetising later on. Andenmatten's headache had become much worse, and he could scarcely at starting stand steady in his steps. Possibly his suffering was due to an hour or two of intensely hot sun, which had struck straight down on us during the ascent. I could not at the moment awaken much professional interest in his case, but the symptoms, so far as I could judge, were more like those experienced by people in diving-bells—were pressure effects in short—for the pain was chiefly in the skull cavities. I may not here enter into technical details, and can only remark now that though Andenmatten suffered the most it by no means followed on that account

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that his head was emptier than anybody else's. In due course we came to the ice-slope up and across which we had cut our way so laboriously in the morning; here, at least, we thought we should make good progress with little trouble; but the sun had struck full on this part of the mountain, and all the steps were flattened out and useless. Every single step ought to have been worked at with as much labour as in the morning, but it was impossible to do more than just scratch out a slight foothold, as we made our way round again to the ridge. Below, on the west side, the slope plunged down into the *Ewigkeit*, and our very best attention had to be given in order to avoid doing the same. It was one of the worst snow faces I ever found myself on, perhaps, under the conditions, the worst. The direction in which we were travelling and the angle of the slope made the rope utterly useless. Close attention is very exhausting: much more exertion is required to walk ten steps, bestowing the utmost possible care on each movement, than to walk a hundred up or down a much steeper incline when the angle demands a more accustomed balance. Not for an instant might we relax our vigilance till, at 5.30 P.M., we reached once more the ridge close to the place where we had forced our way through the cornice in the morning.

"We had little time to spare, and hurrying up to

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the point, looked anxiously down the snow wall. A glance was sufficient to show that the whole aspect of the snow had entirely altered since the morning. Burgener's expression changed suddenly, and a startled exclamation, which I trust was allowed to pass unrecorded, escaped from him. Andenmatten brought up some stones and rolled them down over the edge; each missile carried down a broad hissing band of the encrusting snow which had given us foot-hold in the morning, and swept the ice-slope beneath as black and bare as a frozen pond; here and there near rocks the stones stopped and sank deeply and gently into the soft, treacherous compound. The light had begun to fail, and snow was falling more heavily as we pressed on to try for some other line of descent. A hundred yards further along the ridge we looked over again; the condition of the snow was almost the same, but the wall was steeper, and looked at its very worst as seen through the mist. Some one now suggested that we might work to the north-west end of the ridge and make our way down to the pass by the ice-fall. We tramped on as hard as possible, only to find at the end of our journey that the whole mass seemed abruptly cut away far above the Adine Col, and no line of descent whatever was visible. We doubled back on our tracks till we came within a few yards of the summit of a small peak on the

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ridge, the height of which was probably not less than 15,000 feet. Already the cold was numbing and our wet clothes began to stiffen; again we peered over the wall, but the rocks were glazed, snow-covered, and impossible. The leader stopped, looked right and left along the ridge, and said, 'I don't know what to do!' For the moment we seemed hopelessly entrapped; the only conceivable place of shelter for the night was a patch of rocks close to the summit of the peak near at hand, and for these we made. It was an utter waste of time. Apart from sleeping, we could not have remained there an hour, for we met the full force of the wind, which by this time had risen considerably, and was whirling the driving snow into every crack and cranny. What might have begun as a temporary rest would infallibly have ended in a permanent occupation. Indeed, the cold would have been far too intense that night for us to have lived on any part of the bleak ridge. The situation was becoming desperate. 'We must get down off the ridge and out of the wind.' 'Ay,' said Burgener, 'we must, I know; but where?' The circumstances did not call for reasonable answers, and so we said, 'Anywhere! To stay up here now means that we shall never get down at all.' Burgener looked up quickly as if to say no, but hesitated, and then muttered, 'That is true. Then what will you do? There is

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no way down anywhere along the wall with the snow as it is now. There are great ice-slopes a little way down.' As he spoke he leant over and looked along the wall for confirmation of his opinions. A little way off a rib of rock, blacker than the rest, showed through the mist. We both saw it at the same time; Burgener hesitated, looked at it again, and then facing round glanced at the prospect above. The wind was stronger and colder and the snow was driving more heavily. There was no room for doubt. We must put it to the touch and take the risk. We turned again, and in a few minutes had squeezed ourselves through the cornice, and were fairly launched on the descent.

"We were now at a much higher level on the ridge than at the point we had struck in ascending. It was only possible to see a few yards down; the rocks looked appallingly steep, glazed, and grizzly, and we knew not what we were coming to. But at any rate we were moving, and in a stiller atmosphere soon forgot the cold. We went fast, but only by means of doing all we knew, for the climbing was really difficult. It was a case of every man for himself, and every man for the rest of the party. Now was the time to utilise all that we had ever learned of mountain craft. Never before, speaking for myself only, have I felt so keenly the pleasure of being united to thoroughly

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trustworthy and good mountaineers; it was like the rush of an eight-oar, where the sense of motion and the swish through the water alone are sufficient to make every member of the crew put all his strength into each stroke. The mind was too active to appreciate the pain of fatigue, and so we seemed strong again. Now on the rocks, which were loose and crumbly in parts, elsewhere big and glazed, now in deep snow, now on hard crusts, we fought our way down. So rapid was the descent that, when the opportunity offered, we looked anxiously through the mist in the hope of seeing the glacier beneath. Surely we had hit on a possible line of descent to the very bottom. But there was not a moment for the grateful repose so often engendered by enquiring minds on the mountains. We were racing against time, or at least against the malevolent powers of darkness. Down a narrow flat couloir of rock of no slight difficulty we seemed to go with perfect ease, but the rocks suddenly ceased and gave way to an ill-favoured snow-slope. The leader stopped abruptly and turned sharp to the right. A smooth ice-gully some 30 feet wide separated us from the next ridge of rock. The reason for the change of direction was evident enough when Burgener pointed it out. As long as the line of descent kept to the side that was more sheltered during the day from the sun,

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so long was the snow fairly good. Our leader judged quickly, and with the soundest reasoning, as it proved directly afterwards, that the line we had been following would infallibly lead, if pursued further, to snow as treacherous as that with which we were now so familiar. Across the ice-slope then we must cut, perhaps a dozen or fifteen steps.

"The first two or three Burgener made vigorously enough, but when within 10 or 15 feet of the rocks the extra effort told. He faltered suddenly; his blow fell listlessly, and he leant against the slope, resting hands and head on his axe. 'I am almost exhausted,' he said faintly, as he turned round to us, while his quivering hands and white lips bore evidence to the severity of the exertion. So for a minute or two we stood in our tracks. A word of encouragement called up what seemed almost a last effort, some little notches were cut, and we gained the rocks again. A trickling stream of water was coursing down a slab of rock, and at this we gulped as eagerly as a fevered patient. Standing on the projecting buttress, we looked anxiously down, and caught sight at last of the glacier. It seemed close to us; the first few steps showed that Burgener's judgment was right; he had changed the line of descent at exactly the right moment, and at the best possible place. Down the last few hundred feet we were able to go as

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fast as before. The level glacier beneath seemed in the darkness to rise up suddenly and meet us. We tumbled over the *bergschrund*, ran down a short slope on the farther side of it, and stood in safety on the glacier, saved by as fine a piece of guiding as I have ever seen in the mountains. We looked up at the slope. To our astonishment all was clear, and I daresay had been so for long. Above, in a blue-black frosty sky, the stars were winking merrily; the mists had all vanished as by magic. No doubt the cold, which would have settled us had we stayed on the ridge, assisted us materially in the descent by improving the snow.

"There seemed still just light enough to search for our tracks of the morning across the glacier, and we bore well to the right in the hope of crossing them. I fancy that the marks would have been really of little use, but, anyhow, we could not find them, and so made a wide sweep across the upper part of the snow basin. As a result we were soon in difficulty with the crevasses, and often enough it seemed probable that we should spend the rest of the night in wandering up and down searching for snow bridges. But we reached at last a patch of shale and rock, which we took to be the right bank of the little glacier we had crossed in the morning. Our clothes were wet, and the cold was becoming so sharp that it was wisely decided, against my advice, to push on if possible

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to the tent at once. For some three or four hours did we blunder and stumble over the moraine, experiencing not a few tolerably severe falls as we did so. Andenmatten selected his own line of descent, and in a few minutes we had entirely lost sight of him. It was too dark to find our way across the glacier, and we could only hope by following the loose stone ridge to make our way to the right place. So we stuck to the rocks, occasionally falling and nearly sticking on their detestably sharp points. Even a Caucasian moraine leads somewhere if you keep to it long enough, and as we turned a corner, the huge glimmering mass of Dych Tau, towering up in front, showed that the end of our journey was not far off. Presently the little white outline of the tent appeared, but we regarded it with apathy, and made no effort to quicken our movements, although the goal was in sight; it seemed to require, in our semi-comatose condition, almost an effort to stop. As we threw open the door of the tent the welcome sight of divers packets, neatly arranged in a corner, met our gaze. The head policeman had proved himself an honour to his sex, an exception to his compatriots, and a credit to the force. There were bread, sugar, rice, meat, and firewood—yet we neither spoke nor were moved. Andenmatten spurned the parcels with his foot and revealed the lowermost. A scream of delight went up, for they had found a packet of

AN EXCITING CAUCASIAN ASCENT

tobacco. The spell was broken, and once more all were radiant. Such is man. A strange compound—I refer to the tobacco—it proved to be, that would neither light nor smoke, and possessed as its sole property the power of violently disagreeing with the men. It was past midnight before the expedition was over. There were few preliminaries observed before going to bed. I don't think that even Donkin took more than a quarter of an hour in arranging a couch to his satisfaction, and placing a very diminutive air-cushion on anatomical principles in exactly the right place, while Andenmatten was fast asleep in two minutes, his head pillowed gently on some cold mutton, and his boots reposing under the small of his back. Something weighed on our minds as we too lay down and tried to sleep. The towering cone of Tetnuld, the distant view of Uschba, Elbruz, and the giant Dych Tau, the rock and snow-slopes, pictured themselves one after another as dissolving views on the white walls of the tent. The expedition was over, but the pleasure and the impressions it had evoked were not. Faster and faster followed the visions as in delirium. I sat up, and in the excitement of the moment dealt a great blow at the nearest object, which, as it chanced, was Andenmatten's ribs. I shouted out to my companion. A muffled 'hulloa' was the response, and he too rose up. 'What is it?' 'By Heavens! it is the finest climb we have ever made.' And so it was."

CHAPTER VII

A MELANCHOLY QUEST

THE accident in the Caucasus in 1888, by which Messrs Donkin and Fox and their two Swiss guides lost their lives, was one of the saddest that has ever happened in the annals of mountaineering. I will not dwell on it, but will rather pass on to the search expedition, a short account of whose operations will serve to illustrate how a thorough knowledge of mountaineering may be utilised in finding a conjectured spot in an unmapped region in the snow world.

The year after the accident—for the season when it occurred was too advanced for a thorough search to be then undertaken—a party of four Englishmen, Messrs Douglas Freshfield, Clinton Dent, Hermann Woolley, and Captain Powell, with Maurer of the Bernese Oberland as leading guide, set out from England to try and ascertain how the accident happened, and, if possible, recover the remains. They succeeded, in the course of a profoundly interesting journey, in finding the last camp of their

A MELANCHOLY QUEST

friends, and from Mr Clinton Dent's fine description in *The Alpine Journal* I make, with his kind consent, the following extracts. They show how well the old school of climbers learnt all the routine of their art, and how superior is the trained mountaineer of any nationality to the inexperienced dweller amongst mountains, who is utterly unable to advance a single step upon them.

Having journeyed to the district and got over all the easier ground at first met with, the party was now fairly embarked in the region of ice and snow.

"The day was well advanced," writes Mr Dent, "and it is only on rare occasions in the Central Caucasus that the valleys and sky are free from cloud at such an hour. But not a vestige of mist was to be seen. The conditions were not merely of good omen, but were also in the highest degree fortunate, for the object of our search seemed very minute in the presence of such gigantic surroundings. The air was clear and soft, and the snow in perfect order for walking. We worked our way due west, and gradually, as we turned the buttress of rock, a steep and broad ice-gully came into view, leading up to the pass. This consisted of a broad snow-topped depression, from 1500 to 1800 feet above the snow-field. On the right or east of the pass the ridge ran sharply up to the pinnacle already mentioned, while on the left the ridge, broken up

ADVENTURES ON THE ROOF OF THE WORLD

on its crest by great towers of rock, stretched away to the summit of Dych Tau, the peak of which from our point of view was not visible. A careful inspection of the rocks with the telescope revealed nothing. A possible place for a bivouac might have been found at any point on the rocks below the pass, but no particularly likely spot was evident. It was conceivable too, of course, that the travellers had discovered a more suitable place on the Ullu Auz side, close to the summit of the pass. In any case our plan of action was clear, and we set forth without delay to ascend the wall. Two long ribs of rock lying on the right of the ice-gully offered the best means of access. Both looked feasible, but it was only after a moment's hesitation that the left-hand one was selected, as it seemed more broken, was broader, and ran up higher. If the right-hand rib had been chosen, we might conceivably have missed the object of our search altogether. We made our way up the rocks without any great difficulty. Half-melted masses of snow constantly hissed down the ice-gully as we ascended, and the great chasm that extends along the base of the cliff was choked for the most part with avalanche snow. The rocks were steep, but so broken as to offer good hand- and foot-hold. Still, the mind was sufficiently occupied in attending to the details of climbing to prevent the thoughts from wandering. Insensibly, we began

A MELANCHOLY QUEST

to think little save of the view that would be revealed from the top of the pass. From time to time an opportunity would be found of gazing to the right or left, but progress was tolerably continuous. Maurer, who was leading, looked upwards now and again, as he worked out the best line of ascent, but the rocks were so steep that he could only see a very few feet. Just about mid-day, as he stopped for a moment to look upwards, I saw his expression suddenly change. 'Herr Gott!' he gasped out, 'der Schlafplatz!'¹ I think I shall never forget the thrill the words sent through me. We sprang up, scrambling over the few feet that still intervened, and in a moment were grouped on a little ledge just outside the bivouac. There was little enough to be seen at the first glance save a low horse-shoe shaped wall of stones, measuring some 6 feet by 8, and carefully built against an overhanging rock. The enclosure was full of drifted snow, raised up into a hump at the back, where it covered a large rucksack. On a ledge formed by one of the stones, a little tin snow spectacle-box caught the eye as it reflected the rays of the sun. For a few moments all was excitement as the presence of one object after another was revealed. 'See here,' cried Maurer, as he scooped away the snow with his hands, 'the sleeping - bags!' 'And here a rucksack,' said

¹ "Good God! The Sleeping-place!"

ADVENTURES ON THE ROOF OF THE WORLD

another. 'Look, they made a fire there,' called out a third, 'and here is the cooking kettle and the revolver.' Then came somewhat of a reaction, and for a few minutes we could but gaze silently at the place that told so clear a tale, and endeavour to realise to the full the evidence that had come upon us with such overwhelming suddenness.

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"It is most probable that the accident occurred on the south side of the cliffs forming the eastern ridge of Dych Tau. The party must have been roped at the moment, and it is very reasonable to suppose that they were engaged in traversing one of the many ice and snow covered slopes that exist on this side. What the exact nature of the accident was matters little; but it may be remembered that the snow on such slopes and ledges often binds very lightly, and that there are no mountains, perhaps, where these places are more numerous or more treacherous than in the Caucasus. It was possibly one of those rare instances in which the rope was a source of danger and not of security to the party as a whole. Yet the rule is clear, and it amounts to this: if a place is too dangerous to cross with a party roped, lest the slip of one drag down all, then it is too dangerous to cross at all. So steep are the cliffs that a fall must have meant instantaneous death. As an example, a torn sleeping-

A MELANCHOLY QUEST

bag which was thrown over the bivouac wall fell to the very bottom of the slope, and we saw it just above the *bergschrund* as we descended. It was necessary to take down some of the articles discovered, for we might otherwise have found difficulty in convincing the natives of the success of the expedition, and this was an important point. The height of the pass is 14,350 feet, and of the bivouac about 14,000 feet. We left the bivouac at 3.30 P.M., the day being still perfectly cloudless. The ice-fall offered some little difficulty, one or two of the bridges by which we had crossed in the morning having broken down. Still we were able to keep to almost the same line as that adopted in ascending.

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“No one familiar with the Caucasus would be willing to believe that any native could have reached the bivouac. The people are still very timorous on ice, and are wholly incapable of facing an ice-fall, much less of making any way through one. No native could have been got to the place even if in the train of competent mountaineers; alone, he would not have set foot on the glacier at all.

“A day or two later we made our way down to the collection of villages known as Balkar, a good three and a half hours' walk from Karaoul. The place is not well spoken of, but we were hospitably received and entertained. In this, as in many other villages

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subsequently, the story of our search excited much interest. On every occasion the proceedings were almost exactly identical. As usual in the Caucasus, the natives all crowded into our apartment soon after arrival. Powell would then select some Russian-speaking man in authority, and announce through him that the results of our expedition would be made known to all who cared to hear them. The whole story was then told, and admirably Powell used to narrate it, winding up by pointing out how the people of the district were now exonerated from any suspicion that may have lain on them. Such suspicion, he used to add, had never been entertained by any English people. The account was always listened to in breathless silence. At the conclusion it was repeated by the chief to the natives in their own language. Then the rucksack was brought in and the articles found shown. These were always instantly accepted as absolute proof; the rusty revolver especially excited attention. Expressions of sorrow and brief interjections were always heard on all sides. Then the chief spoke to some such effect as follows: 'We are indeed rejoiced that you have found these traces. It relieves our people from an irksome and unjust suspicion. It is well that Englishmen came to our country for this search, for we believe that no others could have accomplished what you have done. We

A MELANCHOLY QUEST

are all very grateful to you. Englishmen are always most welcome in our country. We are glad to receive them. Our houses are theirs, and the best we can do shall always be done for your countrymen.' In several places—at Chegem, for instance—words were added to this effect: 'We remember well Donkin and Fox; they were brave and good men, and we loved them. It is very sad to us to think that they are lost.'"

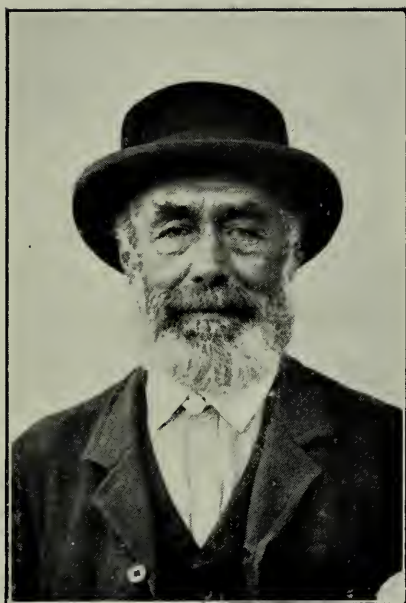
A more detailed account of this melancholy quest will be found in Messrs Douglas Freshfield's and Vittorio Sella's work, *The Exploration of the Caucasus*. It is from this, the most beautifully illustrated of any book on mountaineering, that, with Mr Freshfield's kind permission and that of Mr Willink, I take the picture of the sleeping-place. The finished drawing was made by Mr Willink from a sketch by Captain Powell.

CHAPTER VIII

SOME NARROW ESCAPES AND FATAL ACCIDENTS

PROBABLY not half the narrow escapes experienced by climbers are ever described, even in the pages of the various publications of English and foreign Alpine Clubs, though when an accident by the breaking of a snow-cornice is just avoided, the incident is so terribly impressive that several accounts have found their way into print. Scarcely anything more startling than a certain occurrence on a ridge of the Mönch, which happened to the late Mr Moore and his two guides, Melchior and Jacob Anderegg, has ever been related. The party had succeeded in making the ascent of the Mönch from the Wengern Alp, it being only the third occasion when this long and difficult climb was accomplished, each of their predecessors spending *three days and three nights* on the expedition.

Having gained the summit, the party proceeded to go down by the usual route towards the Trugberg. This follows a very narrow *arête*. "On the left hand," says Mr Moore in *The Alpine Journal*, "is an absolute



MELCHIOR ANDEREGG, OF MEIRINGEN.



A SON AND A GRANDCHILD OF MELCHIOR ANDEREGG, 1903.

NARROW ESCAPES AND FATAL ACCIDENTS

precipice ; on the right a slope, which might be called precipitous, falls to the Aletsch Glacier. The quantity of snow on the ridge was enormous, and the sun had begun to tell upon it. We knew too much to attempt to approach the upper edge, and kept at a distance of some 12 feet below it on the Aletsch side ; lower down we dared not go, owing to the steepness of the slope and the danger of starting an avalanche. With Melchior in front it is unnecessary to say that we moved with the greatest caution. No man is more alive than he to the danger arising from a snow-cornice. He sounded with his axe at every step, and we went steadily along, anxious, but with every reason to believe that we were giving the cornice a wide berth. Suddenly came a startling cry from Melchior. At the same instant I felt myself stagger, and, instinctively swinging ever so slightly to the right, found myself the next moment sitting astride on the ridge. With a thundering roar the cornice on our left for a distance of some 200 yards went crashing down to the depths below, sending up clouds of snow-dust which completely concealed my companions from me. It was only by the absence of all strain on the rope that I knew—though at the moment I scarcely realised the fact—that they were, like myself, safe. As the dust cleared off, Melchior, also sitting astride of the ridge, turned towards me, his face white as the snow which covered us. That

ADVENTURES ON THE ROOF OF THE WORLD

it was no personal fear which had blanched our leader's sunburnt cheeks his first words, when he could find utterance, showed. 'God be thanked!' said he; 'I never thought to see either of you there.' We had, in fact, escaped destruction by a hand's-breadth. As I believe, our right feet had been on the ridge, our left on the cornice; we had thus just sufficient firm standing-ground to enable us to make that instinctive movement to the right which had landed us *à cheval*, for Jacob had fallen in the same position as Melchior and myself. Few words were said; but words poorly express the emotions at such a moment. Melchior's axe had been carried down with the cornice as it fell, but had fortunately lodged on the face of the precipice 50 feet below. It was too precious to leave behind, so we let him down by the rope, and descending in a cat-like way peculiar to first-class guides when not hampered by *Herrshaft*, he regained it without difficulty.

"Our further descent was uneventful."

One of the greatest dangers of mountaineering is from falling stones, yet the number of fatal accidents from this cause is as few as the narrow escapes are many. As exciting an experience as can well be imagined took place on the Aiguille du Midi at Chamonix in 1871. The party consisted of Messrs Horace Walker and G. E. Foster. The latter wrote a graphic account in *The Alpine Journal*, and kindly

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allows me to make the following extracts. The guides were Jacob Anderegg and Hans Baumann, and the climbers wished to ascend from the Montanvert and be the first to go down the steep face of the mountain on the Chamonix side.

After some difficulty in finding the route, for both the guides were unacquainted with the district, and Mr Walker alone knew in a vague sort of way that the peak was somewhere in the neighbourhood of the Géant ice-fall, they eventually stood on the top. It had taken them ten hours, and they sat for some time on the more sheltered Chamonix side, debating by what route they should descend. The slopes below were very steep, so they decided to retrace their steps to the foot of the rocks, and then, turning over on to the Chamonix side of the mountain, make their way as best they could down ice-filled gullies and precipitous rocks. All at first went well, and soon they commenced to cross the face of the cliff to gain a rocky buttress that offered a likely route some hundred feet below the top of the wall. "Jacob was leading," writes Mr Foster, "Walker next, I followed, and Baumann brought up the rear. Only one was moving at a time, and every one had the rope as taut as possible between himself and his neighbour. Jacob was crossing a narrow gully, when suddenly, without any warning, as though he had trod on the keystone of the wall,

ADVENTURES ON THE ROOF OF THE WORLD

the whole face for some 30 or 40 feet above him peeled off, and with a crash like thunder, hundreds of tons of rocks precipitated themselves on him. In an instant he was torn from his hold, and hurled down the precipice with them. Fortunately, Walker was able to hold on, though the strain on him was something awful. As the uproar ceased, and silence even more impressive succeeded, we looked in one another's faces with blank dismay. From our position it was impossible to see what had become of Jacob, and only the tight rope told us that his body at least, living or dead, was still fastened to us. In a voice singularly unlike his own, Walker at length cried out, 'Jacob,' and our hearts sank within us as it passed without response. 'Jacob! Ach Jacob!' Walker repeated; and I trust none of my readers may ever know the relief we felt when the reply came back, 'Ich lebe noch.'¹

"From where I was I could not see him, but Walker craned over a rock, and then turned round. 'I see him. He is awfully hurt, and bleeding frightfully.' I then contrived to shift my position, and saw that he was indeed hurt. His face was black with blood and dirt, the skin torn from his bleeding hands, while his clothes in ribands threatened worse injuries still unseen. After a moment, he managed to recover his footing, and then untied the rope with trembling

¹ "I am still living."

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fingers, and crawled along the face of the cliff to the other side of the gully, where some snow offered means to stanch his wounds.

"As soon as he was safe, Baumann called on us to stand still, and clambered carefully over the spot where the rocks had given way, our only road lying there. I followed, and then Walker, knotting up the rope to which Jacob had hung, crossed last. With Jacob below us, care was necessary in climbing so as to send no more loose fragments on his head, but we at last reached the spot where he was standing. Thanks to the snow, the bleeding had already stopped to a great extent, and with the aid of some sticking-plaster Walker had with him, and some torn strips from a pocket-handkerchief, we bound up his wounds as well as we could. He had had a marvellous escape; no fragment had struck him fully, the rock that had grazed his face having missed knocking out his brains from his presence of mind in throwing back his head. Fortunately, no bones were broken, though he was badly bruised all over, and after a quarter of an hour's rest and a good pull at the brandy-flask, he said he was ready to start again.

"On taking hold of the rope to tie him on again, we were awestruck to find all its strands but one had been severed, so that his whole weight had hung literally on a thread. Strange as it may appear, the

ADVENTURES ON THE ROOF OF THE WORLD

rock that had done this had probably saved his life by jerking him out of the line of fire. Still, all honour to Messrs Buckingham for their good workmanship, to which, and Walker's holding powers, we owe our escape from a miserable ending of our day's work. As it was, poor Walker's ribs had suffered sadly, and with two wounded men we recommenced our descent.

"Naturally, our trust in the rocks was gone, and we took as soon as possible to the steep snow of the couloir. This, however, lay so thin on the ice, that we found we had only exchanged one danger for another. Baumann led and we followed, driving in our axe-heads at every step; but were soon forced to descend into a narrow gully, cut by avalanches, where the snow was deep enough to give better footing. The sides of this were above our heads, and the bottom not more than a foot wide, so that the danger from avalanches was very great, but for a time we descended safely. Then a startled shout from Walker warned me that something was wrong, and driving my axe desperately into the side, I found myself up to the neck in a snow avalanche. For a moment I thought all was up, but held on to the best of my powers. Then finding the stream did not stop, I looked back, and found Walker and Jacob had contrived to get out of the gully. With a shout to Baumann, I gave a desperate struggle, and followed

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their example, and instantly saw the snow I had held up surge over Baumann's head. For a moment he held on, then climbed out on my side. We waited till the avalanche had passed, two of us on one side of the gully and two on the other, and then Walker and Jacob jumped into it with a groan, as it shook their bruised bones, and climbed up to our side, and with an occasional look for Baumann's hat, which the avalanche had carried off with it, pursued our way.

"So long and steep was the couloir, so thin and treacherous the snow layer on the ice, that a good hour elapsed before we reached the bottom, where a formidable *bergschrand* cut off access to the glacier. Only at one point could we find a bridge, and that was where our old enemy, the avalanche gully, terminated, choking the crevasse with its snows, and spreading in a fan-like mass below. With some hesitation, as our recollection of it was not pleasant, and it was here all hard ice, Baumann cut his way down into it. We were scarcely all fairly in it, when we heard a tremendous crash above. Clearly, another avalanche was descending, this time composed of rocks. As it was 2000 feet above us, and would take some time to clear the distance, a short race for life ensued. Baumann cut steps with amazing rapidity. Fortunately, some half dozen only were necessary. With one eye on

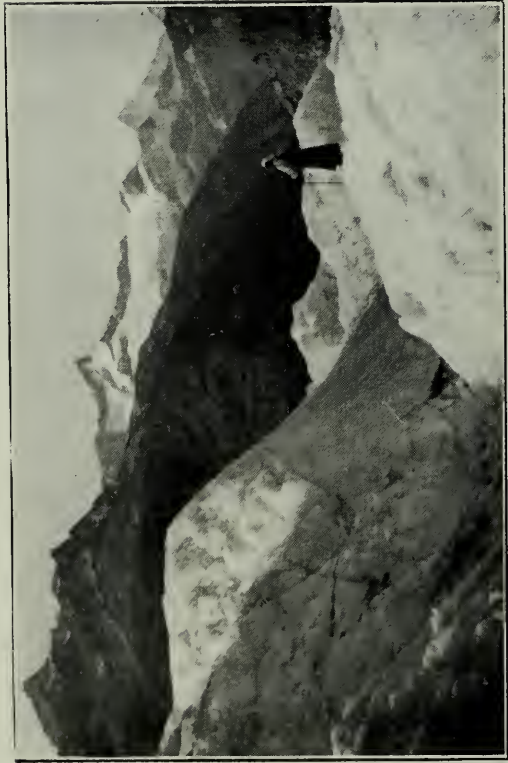
ADVENTURES ON THE ROOF OF THE WORLD

him and one keeping a sharp look-out for the advent of the unwelcome stranger, we hastened down, crossed the bridge, scampered down a slope, and merely stooping down to pick up Baumann's hat, which turned up here, got out of the way just in time, as an enormous mass of snow and rocks dashed over where we had stood not a minute before."

This was the last adventure the party had that day from avalanches, but their troubles were as yet by no means over. Some formidable glacier work had to be accomplished before all was plain sailing. "Though we were now tolerably reckless, the difficulties in our way nearly beat us," Mr Foster goes on to say. "Three times we tried, and thrice in vain, though knife edges of the most revolting description were passed, and crevasses of fabulous width and depth jumped or got over as seemed best. Again and again we were forced to return. At length, when we were almost in despair, a way was found, and at 6.30, drenched by the storm which by this time had burst upon us, we reached the little hotel at the Pierrepointue."

There are no climbing dangers which skill and care can more surely avert than those which are ever present on a crevassed, but snow-covered glacier.

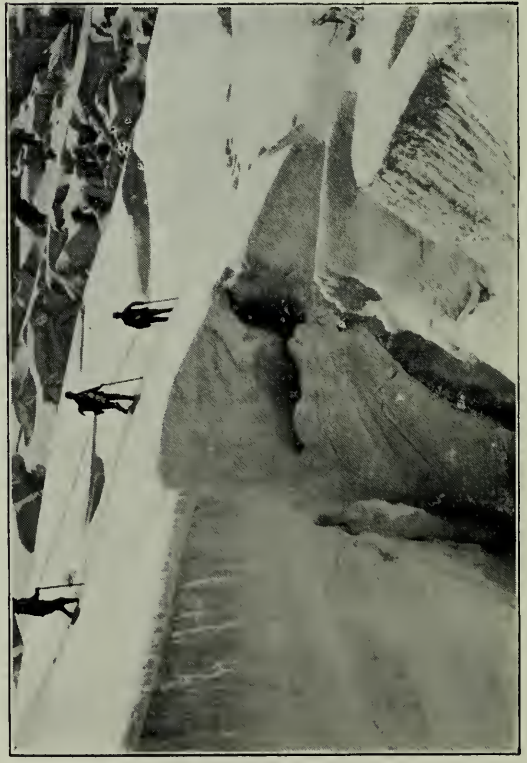
Should a party fail to arrest the fall of one of its members, and have difficulty in pulling him



CREVASSES AND SÉRACS ON THE LOWER PART OF
A GLACIER.



ON THE BORDER OF A CREVASSE ABOVE THE
SNOW LINE.



A SNOW BRIDGE OVER A CREVASSE.



SOFT SNOW IN THE AFTERNOON ON A GLACIER.
By Signor R. Cajrati Crivelli Mesmer.

NARROW ESCAPES AND FATAL ACCIDENTS

above ground, however, the position may become most serious. If another party is within hail, matters are generally simple enough, yet even for four or five people it is not always the easiest thing in the world to haul up a companion who has disappeared into the bowels of the earth, especially if the folly of walking unroped has been indulged in.

A good description of what might have been a serious business but for the skill and resource of a member of the party is given in the course of a description of some climbs in the Rocky Mountains. The writer, Mr Harold B. Dixon, says in *The Alpine Journal*: "A snow-covered crevasse crossed our route at right angles. The party in front, who were without ropes, saw the crevasse, and proceeded to leap it. All crossed in safety but the last man, who broke through the snow and disappeared. Through the hole the wide mouth of the crevasse was revealed, showing the danger of trusting to the frail bridge. It was obviously dangerous to recross without a rope, so his companions signalled to us for help, but for some time we failed to observe their signals.

"Though stunned by the fall our friend was not materially damaged, but he was in a sufficiently awkward fix. Jammed between the narrowing walls of ice, he was unable to move a limb except his right arm. The crevasse did not drop perpendi-

ADVENTURES ON THE ROOF OF THE WORLD

cularly, but the ice-wall bulged out from the side we stood on, and then curved over out of sight; we could not see down more than 18 feet. We stood in a little semicircle at the hole, and one short sentence was spoken: 'Some one must go down.' We looked at each other. Sahrbach and Baker are large and heavy men: it was obvious they must 'pass.' I am of lighter build; I proclaimed my 11 stone and readiness to go. But Collie went better. 'I am 9 stone 6,' was his deliberate statement. There was no means of seeing if this was a bluff, so we threw up our hands—the trick was his. Tying a stirrup loop for one foot and a noose round his waist, Collie attached himself to one rope, which was then joined to a second. Meanwhile the Americans were brought across the crevasse by the aid of another rope, and axes were fixed deep in the snow in suitable positions to fasten the rope to. Then we let Collie down as far as he would go. An anxious moment followed. 'I can't reach him,' came Collie's voice from below. Then, after a few minutes, 'Send down a slip knot on the other rope.' We made the knot and lowered the rope. How Collie managed it I don't know, for he could not reach his man, but he threw the loop round the prisoner's right arm, and then called on us to pull. At the second haul we felt something give, and our friend was pulled into an upright position, when

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Collie could just reach him with his left hand, and with this he tied a knot above the elbow of his right arm. By this knot we hauled him out of the narrow crevasse and on to the bulge of ice without difficulty. But as we pulled the rope cut into the snow, and we could not raise our burden within 6 feet of the surface. Then, while the rope was held taut, one of us worked the handle of an axe along under the rope by sitting on the snow and pushing it forward with his feet. In this way the rope was loosened, and we could haul up another 3 feet, and then Sahrbach, leaning over, reached his collar, and our half-frozen friend was deposited on the snow with an assortment of flasks, while we fished out Collie from his uncomfortable position. They were both very wet and cold, but no bones were broken."

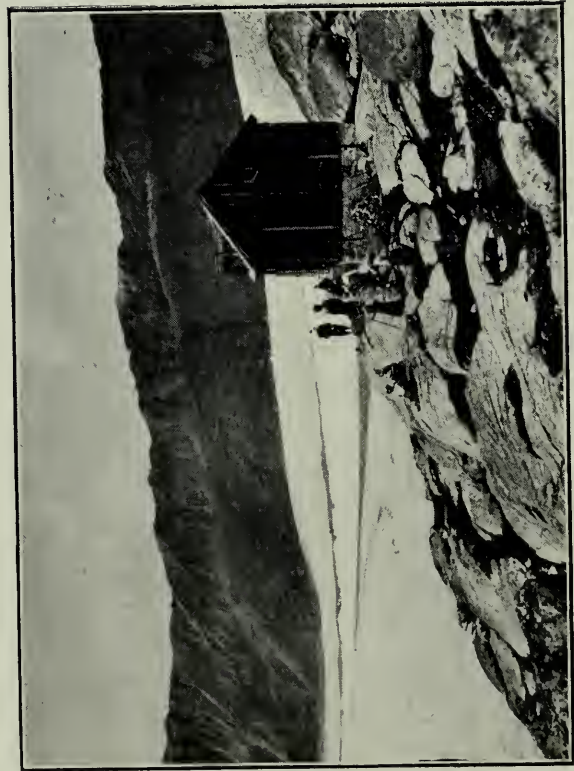
Here we see that even with a large party of competent people, it was no easy matter to rescue a comrade from his icy prison. The details are well given, and may be useful to any one so unfortunate as to require by personal experience a knowledge of what should be done under similar circumstances.

The danger of crossing snow-covered glaciers when the party does not number more than two was brought home to those who heard of it by one of the most tragical events which has ever been recorded in the annals of mountaineering. A

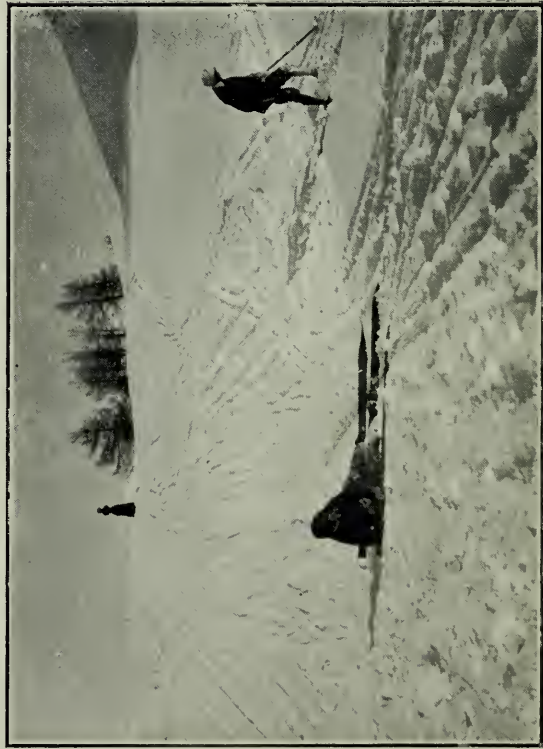
ADVENTURES ON THE ROOF OF THE WORLD

German, Dr Schäffer, had been celebrating his golden wedding at a small place on the Brenner on 22nd August 1900. He engaged a guide, by name Johann Offerer, and, sleeping at a hut, started early next morning. They reached the Wildlahner Glacier in an hour and a half from their sleeping quarters, and after traversing it for some distance came to a large crevasse. This the guide crossed safely on a snow bridge, but the tourist, a much heavier man, broke through, and pulled his companion down with him. They fell about 100 feet, with the result that the guide had a broken thigh and arm, while Dr Schäffer only bruised his knee. He put his coat round Offerer and left food beside him, and then tried to get out of the crevasse. After hours of toil and pain he managed to reach a ledge not very far below the mouth of the crevasse, but further he could not get. At last he gave up all hope, and sat down to die, first, however, writing a full account of the accident, and leaving a sum of money for the widow of his guide. It is to this pathetic last effort of his life that we owe our knowledge of what happened. The only other instance at all like it is the terrible accident on Mont Blanc in 1870, when eleven persons perished in a snow-storm, one of their number, Mr Bean, leaving details in his diary of the events immediately preceding the catastrophe.

It was only on 5th September, after a long search,



THE BETÉMF'S HUT.

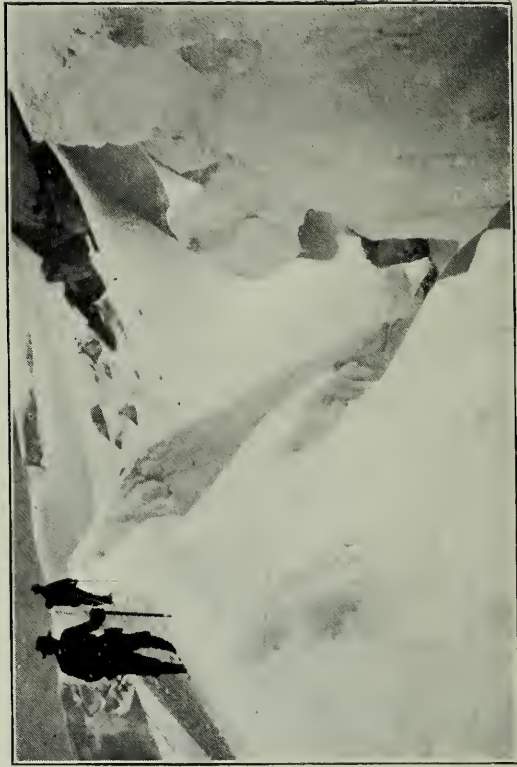


HOW A BEGINNER USUALLY ENDS A RUN.

To face p. 137.



SKI-ING.



A GREAT CREVASSE IN THE UPPER SNOW FIELDS.

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that the remains of the two unfortunate men were discovered.

The following is of special interest, because, of late years, the Norwegian sport of ski-ing has become exceedingly popular in Alpine winter resorts. It is impossible, however, owing to the great length of the ski, to go in difficult places on them, and therefore mountaineers have only used them when intending to ascend to points accessible entirely over snow-slopes, not much broken up by crevasses. The first fatal accident to a climbing party on ski took place in 1902, and may serve as a warning to those intending to traverse glaciers in winter on skis, or indeed even without them. I take my account from a translation from the Italian, which appeared in *The Alpine Journal*. The comments by the editor should be laid to heart.

“A party of five gentlemen and four Zermatt guides left Zermatt on 24th February for the Bétemps Hut, with the intention of ascending the Signalkuppe and the Zumstein, *via* the Grenz Glacier and the Capanna Margherita.

“The 25th was spent in ski practice in the neighbourhood of the hut. On the 26th the whole party, with the exception of one guide who had brought a defective pair of skis, left the hut at 3.30 A.M. in weather marked by no adverse conditions of any kind. The Grenz Glacier was reached somewhat

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west of the point marked 3344 mètres on the Siegfried map. The party unroped, proceeded upwards on their skis towards the point marked 3496 mètres, the surface of the glacier, covered with deep snow, showing no crevasses nor the indications of any. About midway between 3300 mètres and the point 3344 mètres the caravan found itself on a gentle slope, when a muffled crack was heard, and Herr Koenig, Herr Flender, and one of the guides, Hermann Perren, were seen to sink almost simultaneously into a concealed crevasse about 6 feet in width, which ran in a direction parallel with the glacier, carrying with them a mass of snow about 65 feet in length and over 14 feet in thickness. Obviously, no amount of probing would have indicated the presence of the crevasse, and thus by an unfortunate coincidence the three men were standing at the same time over the hidden abyss without knowing it. One of the other guides was instantly lowered into the crevasse by the only available rope (the other being on Herr Flender's back), which proved to be just too short to reach Hermann Perren, who had fallen about 90 feet, and was standing upright against the side of the crevasse, held fast in a mass of snow which had left his head and one arm free. Two of the party hurried down to fetch another rope from the Bétemps Hut. In the meanwhile Perren had managed, after a struggle of two and a half hours, almost to set himself

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free, and was eventually drawn out safely, practically uninjured, save a slightly frost-bitten hand. The dead body of Herr Flender, found with his neck broken, partially covered with some 2 feet of hard snow, was then extricated, but in spite of persistent efforts the body of Herr Koenig was not recovered until the next day, when he was found lying face downwards under a mass of compact snow over 10 feet thick. Death in his case was instantaneous, caused by suffocation, the body bearing no signs whatever of external injury. Herr Koenig was laid to rest in the English cemetery at Zermatt, while the body of Herr Flender was conveyed by his relatives to its last resting-place at Düsseldorf. This is, we think, the first fatal accident which has occurred to a party of climbers on skis bound on a serious climbing expedition. The party on this occasion cannot with justice be accused of recklessness, for the apparent neglect of the usual precaution of putting on the rope on a snow-covered glacier will not be misunderstood by those accustomed to the use of skis, who will readily understand that the rope is practically impossible, and even dangerous, for a party on skis.

“A remarkable feature of the accident was the thickness of the mass of snow which gave way under the three men, and demonstrates the extreme insecurity of winter snow on a crevassed glacier. It

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is possible that the three men were perhaps too close to each other at the time of the accident.

"It is evident that winter climbers who wish to use skis must carry their lives in their own hands, and perhaps the safer plan for future expeditions of this kind will be to make the ascent roped in the usual way on snow *racquettes* carrying the skis on the back. On the descent the risk of breaking through the snow covering during the rapid progress on skis would of course be very much less than on the ascent."

One of the most fruitful causes of accidents on mountains is the underrating of difficulties by ignorant persons who, having been hauled up and let down precipices by a couple of sturdy guides in fine weather, proceed to inform their friends and acquaintances that "Nowadays the Matterhorn is mere child's play, don't cher know."

A sorry tale is told by the famous climber, Mr Cecil Slingsby, who, himself accustomed to undertake the hardest climbs without guides, would be the first to discourage imitation in any unfit to follow in his steps.

Writing of Skagastöldstind, in Norway, of which he made the first ascent, and which is still considered the most difficult of the fashionable climbs in that country, he says in *The Alpine Journal* :

"In 1880 a young tourist, son of a rich banker,

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whom I will call Nils, desirous of emulating our exploits, attempted the mountain, and with the assistance of two good climbers, who shoved and hauled him up the rocks, succeeded in reaching the summit. Unfortunately, he afterwards wrote a pamphlet of sixty-six pages about the mountain, in which he underrated its difficulties. This pamphlet, I unhesitatingly assert, has been the main cause of a terrible tragedy which took place on Skagastöldstind. It was in this manner. At one of the series of huts built by the tourist club a young man, named Tönsberg, who had been partially deranged, was staying with his wife, and was deriving much benefit from the mountain air. Here he read this pamphlet, and inferred that though Skagastöldstind was undoubtedly a very fine mountain, yet the difficulties of its ascent had been much exaggerated, and that any one might make it. Upon this he set off with a lad seventeen years of age, at 9.30 P.M., in vile weather; walked through the night (in the middle of summer it is never dark), and reached a saetor (or châlet) at 3 A.M.; here they found Peter, one of Nils' guides, who refused to have anything more to do with the mountain. At last, by means of bribes, and by promising to turn back at once if the mountain should prove impracticable, Peter was persuaded to go forward; and at 6 o'clock they sallied out into the wet. Wind and snow soon

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assailed them, but Tönsberg would persist in his rash work. At 11 they reached the actual base of the peak, 4100 feet below the top. The lad was frost-bitten and could go no further; neither could Peter. They tried to tie the man with ropes, but he was too strong for them, and used his alpenstock against them, and it was no good. Soon afterwards he left them in the mist, and in twenty strides was out of sight. A month or five weeks after this his remains were found in a deep chasm between a glacier and the rocks, amidst crags at least 2000 feet higher up on the mountain. I may add that the valley Midt Maradal, out of which Skagastöldstind rises, is so difficult to approach, that though it contains rich pasturage at its lower end—a mine of wealth in Norway—its owner, a man of forty-five years, who has overlooked it hundreds of times and lives within three miles of it as the crow flies, had never been in it when I saw him last, and has asked me several times to guide him into it.”

Referring to an expedition from Mouvoison, which began, as do most climbs, over grass slopes, Mr Clinton Dent remarks in *Above the Snow Line* :

“One ascent over a grass slope is very much like another, and description in detail would be as wearisome as the slopes themselves often prove. Yet it is worthy of notice that there is an art to be acquired even in climbing grass slopes. We

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had more than one opportunity on the present occasion of seeing that persons look supremely ridiculous if they stumble about, and we noticed also that, like a bowler when he has delivered a long hop to the off for the third time in one over, the stumbler invariably inspects the nails in his boots, a proceeding which deceives no one. It is quite easy to judge of a man's real mountaineering capacity by the way in which he attacks a steep grass slope. The unskilful person, who fancies himself perfectly at home among the intricacies of an ice-fall, will often candidly admit that he never can walk with well-balanced equilibrium on grass, a form of vegetable which it might be thought in many instances of self-sufficient mountaineers, would naturally suit them. There is often real danger in such places, and not infrequently the wise man will demand the use of the rope, especially when there are any tired members among the party. There is no better way of learning how to preserve a proper balance on a slope than by practising on declivities of moderate steepness, and it is astonishing to find how often those who think they have little to learn, or, still worse, that there is nothing to learn, will find themselves in difficulties on a mountain-side, and forced to realise that they have got themselves into a rather humiliating position. We may

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have seen, before now, all of us, distinguished cragsmen to whom an ascent of the Weisshorn or Matterhorn was but a mere stroll, utterly pounded in botanical expeditions after Edelweiss, and compelled to regain a position of security by very ungraceful sprawls, or, worse still, have to resort to the unpardonable alternative of asking for assistance."

The following accounts of adventures on grass slopes, taken from *The Alpine Journal*, may serve to bear out the truth of Mr Dent's remarks:

"On Monday, 31st August, Mr J. F. C. Devas, aged 26, accompanied by a friend, Mr A. G. Ferard, proceeded after lunch to take a stroll from the Riffel-Haus towards the Gorner Glacier by the Théodule path. Before reaching the glacier they returned, Mr Ferard by the ordinary route. Mr Devas, leaving the path to the left, attempted a short cut by climbing some wet and slippery rocks leading to a grass slope above. He reached a difficult place, immediately below the slope, beyond which he was unable to go. Mr Ferard made his way as speedily as possible to the grass slope and to within a few yards of his friend. While Mr Ferard was endeavouring to render assistance, Mr Devas, in trying to pull himself up, lost his footing and slid down about 70 feet to a ledge covered with turf, which it might have been

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hoped would have arrested his fall. Unfortunately, the impetus was sufficient to carry him over the ledge to a further distance of about 70 feet below. His friend hastened to the Riffel-Haus for assistance, and a number of guides and porters, accompanied by Mr Ferard and a French gentleman, hurried to the scene of the accident. Mr Devas, who had sustained a severe fracture of the skull, was brought back to the Riffel-Haus about 5 P.M., where he received the most unremitting care from M. Seiler's staff of servants. He was unconscious from the moment of the accident till he died at noon of the following day."

Another writer gives an account of an adventure on a grass slope which, happily, had a less serious ending. He also attempted to make a short cut.

"I entangled myself in an adventure which, as nearly as possible, ended in a catastrophe. Not caring to turn back, I followed a track past the châteaux of Cavrera, in hope of being able to find a direct ascent over the steep lower ground that enclosed the head of the valley. It seemed as I advanced that among the ledges of rock and grass at the left-hand corner there would be access to the path above. A dubious and attenuated track which led me up in this direction after giving evidence of design in a few steps notched in the great gneiss slabs, vanished, leaving me to choose between the

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slabs which sloped up in front and a line of juniper bushes on the left of them. As the slabs at this spot could be walked upon, and higher up seemed to ease off again, I kept to the rocks without investigating the juniper belt. But walking exchanged itself for climbing, and I continued to ascend under the impression that I should shortly gain the inclination above. I came to a spot where I had to raise myself on to a small rounded knob of rock with a slight effort, there being no hand-hold above. From this vantage-ground I was able to repeat the process, still buoyed up with the belief that the easy part would be reached above, and to hoist myself on to the only remaining hold in the neighbourhood—a strong tuft of grass in a sort of half corner in the slabs—which supported one foot well, but one foot only. I now found I could go no further. The strata inclined downwards, so that the smooth and crackless slabs overlay one another like the slates on a house-roof, and there was no more hold for hand or foot apparent, while the slabs were far too steep for unsupported progression. The next discovery was a much more alarming one; I looked below, wondered why on earth I had come up such a place, and saw at a glance that I could not get down again. If I fell, moreover, it would not be by the line of my ascent, but down steeper rocks and to a lower depth. Generally in a dilemma

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in climbing there is a sort of instinctive feeling that an escape will be made at last, but now, for the first time, I was seized with a sentiment akin to despair. One chance only remained, and that was to take off my boots and stockings and try the slabs above.

“The stories of extraordinary predicaments in the Alps one is apt to receive with some incredulity. I never altogether accepted the tale of the chamois-hunter’s gashing his feet, and, needless to say, it did not occur to me to imitate him in this particular. For the rest, I can only promise the literal narration of circumstances *as they presented themselves to me at the time*. It is, indeed, sufficiently sensational without exaggeration. Well, it appeared at first impossible to take my boots off; I was facing the rocks with one toe on the turf, and the necessary manipulation could not be accomplished. What was to be done? This was, perhaps, the worst moment of the whole, as far as sensation went. However, by turning round, and planting my heel on the tuft and my back on the rock, I found myself in a secure and tolerably comfortable position. I now set to work and slung my boots separately round my neck as I took them off, pocketing the socks. All was done with deliberation; the laces were as usual untied with the button-hook in my cherished knife, and the latter was carefully returned to my pocket with the thought that if it went down it should be

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in my company. Meantime the necessary rigidity of position had to be preserved ; there was only room in the turf for one heel, and for the point of my ice-axe, for which there was no other possible resting-place. Its preservation, indeed, that day was wonderful ; at one time I felt a momentary temptation to throw it down in order to better the hold with the hand, but this would not bear a second thought.

“I now lost no time in placing myself on the slabs. I found that I dare not move on them in an upright position, and had to seek support with both hands. My condition was not an enviable one, and in no direction could an effort to proceed be made without danger. The situation was as follows : If I could manage to advance in front, I should, eventually, reach the more easily inclined slabs, on which I could walk ; but then it was some way. If I could cross the much shorter interval (some 15 feet) to the right, I should reach a grass band below the rocks at the side ; but then there intervened a broad, black, glistening streak, where waters oozed down and where to tread was fatal. Suddenly, without any warning, I found myself going down. I remember no slip, but rather that it was as if all hold gave way at once under the too potent force of gravity. Anyhow I was sliding down the rocks, and that helplessly I made, I



The balloon "Stella" getting ready to start from Zermatt for the first balloon passage of the Alps, September, 1903.

(P. 301.)

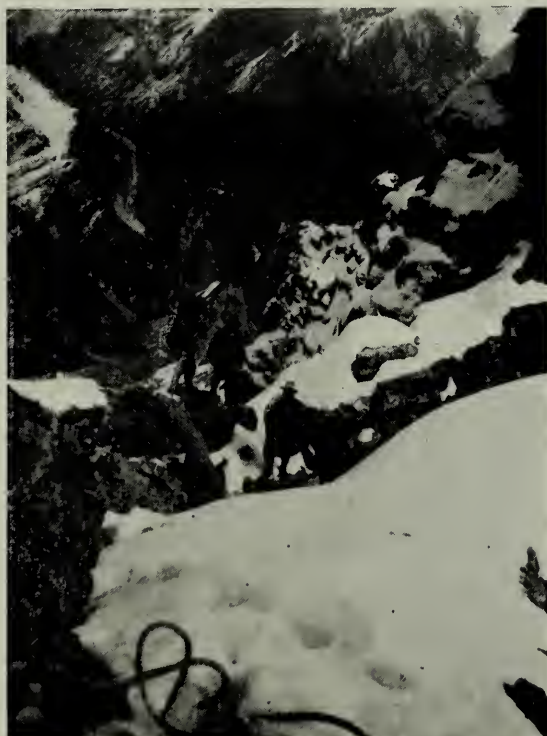


A bivouac in the Alps in the olden days.
By the late Mr. W. F. Donkin.



Boulder practice on an off day.

To face p. 148.



The last rocks on the descent.

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believe, little or no attempt to obtain fresh hold ; I simply remained rigid in the position in which I was, waiting for the fatal momentum to come which should dash me below. The instants passed, and at each I expected the momentum to begin. I felt quite a surprise when, instead, the sliding mass slowly pulled up and came to a stoppage. The scales of fate had been most delicately balanced, and a hair's weight in the right one decided that this paper should be written. Had I floundered, like a non-swimmer out of his depth, I must have gone down ; but the first moments of despondency past the opening for action had once for all brought with it that species of mechanical coolness which is the happy concomitant of so many forms of habitual physical occupation.

“ If it be asked, what were my thoughts when I was going down, I can only reply that they chiefly amounted to a sort of dull feeling that I was actually in for a fall, being concentrated on waiting for its inevitable commencement ; and that there was no such terror or disagreeable realisation of the situation as people are apt to assign to such moments. Such realisations exist most deeply in the imaginations of the non-combatants outside the fray. During the whole affair my attention was mainly directed to the physical combating with difficulties, and the passing reflections were partly

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indifferent, partly frivolous. A sort of acceptance of the position, indeed, possessed me, which almost amounted to a melancholy complacency, and, at most, perhaps, the customary 'When I get out of this' was changed as fast as it rose up in my imagination into a sadder 'If ever.' It was the feeling of the gamester or the soldier surprised at last by adverse odds, intent on his craft as at other times, but with a new and melancholy consciousness.

"My first thought when I came to a standstill—I cannot have gone more than a couple of feet at most—was what I could do even then, with no more hold than before? But I placed myself again in my old position on the tuft; and reflecting that if I had been intended to go down I should have gone then, and almost feeling as if, having escaped that extremity of risk, I had a sort of security for the rest, I resolved without further hesitation to make a determined effort. I once more raised myself on my feet and decided to make a push across the slabs to the grass belt at all hazards; possibly, in case of slipping on the way, I might be able to make a desperate sort of rush for it. I now found two unevennesses in succession, which would allow the side of the foot to rest in them with some chance of staying, while I moved my body along, there being at no time hold for the hand. The second of these slight hollows was

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fortunately in the dread bank of moisture itself. Below, the rocks shelved away to a steep fall; in front, the grass tufts smiled on me nearer and nearer. While I was feeling along the slabs with the hand that held my ice-axe, the latter by chance fixed itself in a cavity that would otherwise have escaped my notice. It was just about the size and depth of a half-crown, and could not have been caught by the fingers, but the rigid iron stuck in it. This was perhaps the first bit of direct hold I had. A yard further on was another of the same size. But now I had passed the wet rock and was nearing the grass, and carefully launching my ice-axe, so as not to disturb my balance, I hooked it in the grass, and in another moment had reached its hospitable tufts. Creeping up the side, I at last found *terra firma*."

CHAPTER IX

A NIGHT ADVENTURE ON THE DENT BLANCHE

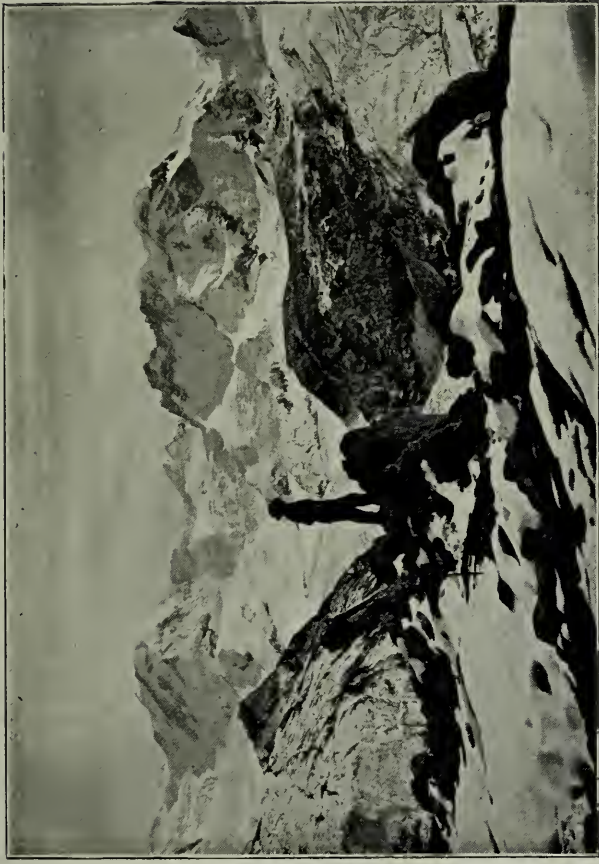
MR CECIL SLINGSBY has kindly allowed me to extract the following admirable account of a guideless ascent with two friends of the Dent Blanche. It will be noticed that during a very cold night they "avoided" their "brandy-flask like poison." When a climber is exhausted and help is near a flask of brandy is invaluable, but when a party has to spend a bitterly cold night in the open, it is madness to touch spirits at all. The effect of a stimulant is to quicken the action of the heart and drive the blood with increased rapidity to the surface. Here it is continually cooled, and before long the heart finds it has to work double hard to keep up the circulation. Therefore to take brandy in order to resist the cold for hours together is like stirring up a cup of hot fluid, whereby fresh surfaces are continually brought in contact with the air and cooled with far greater rapidity than if left quiet. The best companion a climber can have during a night out above the snow-line is a small spirit-lamp. With this he



PROVISIONS FOR A MOUNTAIN HOTEL. By Royston Le Blond.



To face p. 152. THE DENT BLANCHE FROM THE THEODULE GLACIER IN SUMMER.



AN OUTLOOK OVER ROCK AND SNOW.



THE DENT BLANCHE FROM THE SCHWARZSEE IN WINTER.

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can amuse and fortify himself at intervals, melting snow and making tea or soup, which will be of real help in enabling the party to pass without injury through the ordeal. Doctors and climbers of experience will, I know, bear out what I say. The truth of it was once more shown not very long ago under the following circumstances :

In August 1902 two French tourists with a guide and a porter set out to ascend Mont Blanc. The weather became very bad, nevertheless they pressed on, hoping to reach that veritable death-trap, the Vallot Hut. In this they failed, and as the hour was late they took the fatal course of digging a hole in the snow in which to pass the night. They were provided with brandy, and, doubtless in ignorance of the results it was sure to cause, they shared all they had. Both travellers died before morning, and the guides then attempted to descend to Chamonix. They seem to have been dazed, and to have lost their heads, and within a few minutes of each other each fell into a crevasse. The porter was killed on the spot, the guide was rescued, but little injured, after six hours' imprisonment.

Will people ever realise that Mont Blanc, by reason of the very facility by which it may be ascended, is the most dangerous mountain a beginner can ascend? He is almost certain to chance on incompetent guides, and these, if the weather becomes bad, have not the

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moral force—indeed a first-class man would have something even more compelling—to insist on an immediate return. The size of the mountain is so great that to be lost on it is a risk a really good guide would simply refuse to face.

To turn now to Mr Slingsby's narrative. His party had reached the *arête* of the Dent Blanche without incident, and he writes:

"The rocks on the crest of the ridge were in perfect order. The day was magnificent, and there was not the remotest sign of a storm. Climbers who were on neighbouring mountains on this day all speak of the fine weather. My friend, Mr Eric Greenwood, who was on the Rothhorn, told me that that peak was in capital condition, but that there was a strong N.W. wind blowing at the top. We had perfect calm. Mr Greenwood stopped on the snow *arête* till a late hour in the afternoon, taking photographs, and neither his guides nor he had the slightest expectation of a thunder-storm.

"We stuck faithfully to the ridge, and climbed up, and as nearly as possible over, each point as we reached it, because of the ice which shrouded the rocks almost everywhere on the west face.

"We were forced on to the face of one little pinnacle, and had to use the greatest care.

"Nowhere did we come to any place where we

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felt that our powers were overtaxed; still, the work was difficult, though not supremely so.

"A few days later I met Mr Conway at Breuil, and I asked him what he meant in this case by the term, 'following the *arête*.' His interpretation, which is rather an elastic one, is this: 'Climb over the pinnacles if it is convenient to do so. If not convenient, shirk them by passing below their western bases.' This latter method was most probably impracticable on the occasion of our ascent, which fully accounts for the great difference between Mr Conway's 'times' and our own, as we certainly climbed at least as quickly as an average party on the Dent Blanche during the whole of our ascent.

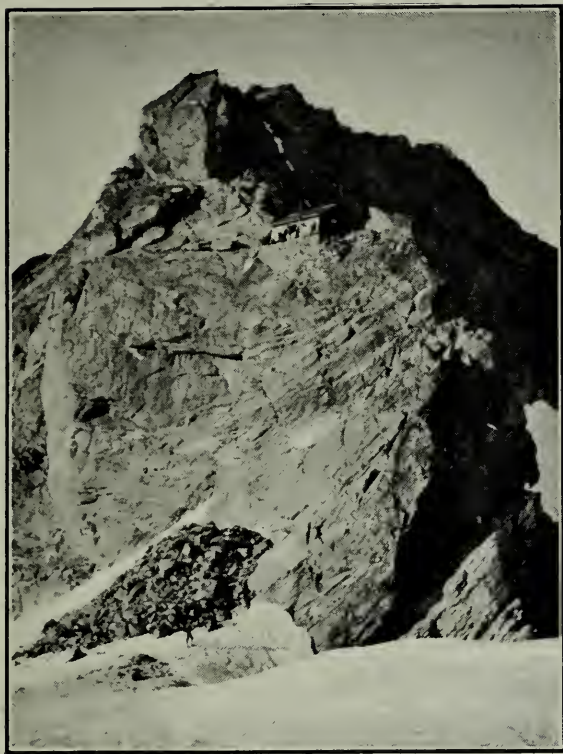
"The time sped merrily and quickly by, and the difficulties decreased as we hastened onward. Just as we left the last rocks a light filmy cloud, sailing up from the north, hovered for an instant over the top of the mountain, and then settled upon it; otherwise, though it had then become exceedingly cold, the sky was clear and the day perfect, and we could not help comparing our good fortune with that of those early climbers who fought their way upwards, step by step, against most ferocious gales.

"After some tiring step-cutting on the gentler slopes above the rocks, which, like the west face, were sheathed in ice, we reached at last the south

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end of the little flat ridge which forms the summit of the Dent Blanche, where a small flagstaff is usually to be seen. Here there was an enormous snow cornice which overhung the eastern side. The little cloud merely clung to the cornice on the ridge, and evidently had no malice in it at all. None of us put down the time at which we reached the top. One of us thinks that it was just after four o'clock, but the memory of the two others is clear that it was between three and four; at any rate, of this we are all agreed, that it was not so late as 4.12, the hour when the author of *Scrambles in the Alps* reached the summit in bad weather. My watch, being out of order, was left at Zermatt.

"We left directly, and in less than a minute were out of the little cloud, which was uncommonly cold, and again we revelled in bright sunshine. We were under no apprehension of danger, nor had we any reason whatever to be anxious, as our way was clear enough: there was no doubt about that. We were in capital training, and we had, most certainly, a sufficiency of daylight still left to allow us to get well beyond every difficulty upon the mountain. Moreover, Solly, with his usual instinctive thoughtfulness, carried a lantern in his pocket, and we had left another lower down. Thus we had a most reasonable expectation of reaching the Stockje that evening, and Zermatt early the next morning.



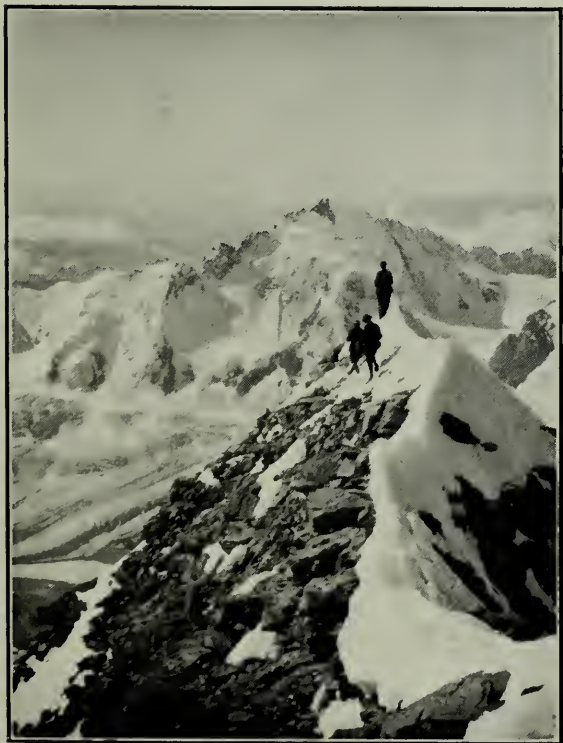
The hut on the Col de Bertol, where climbers now often sleep for the ascent of the Dent Blanche.

By Mr. Leonard Rawlence.



A party ascending the Aiguilles Rouges (Arolla). The people can be seen on the sky-line to the left, at the top of the white streak.

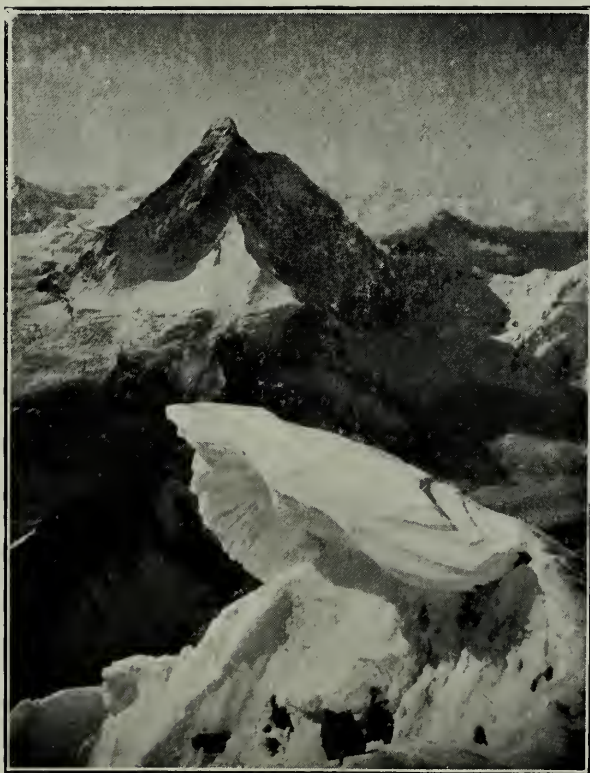
By Mr. Leonard Rawlence.



The summit of the Dent Blanche.

By Mr. Leonard Rawlence.

To face p. 156.



Cornice on the summit of the Dent Blanche.

By Mr. Leonard Rawlence.



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"When we had come down for about an hour, we saw an occasional flash of lightning playing about the Aiguilles Rouges d'Arolla. This was the first indication that we had of foul weather. Soon afterwards a dark cloud crept up ominously over the shoulder of Mont Collon, and on to the Pigne d'Arolla. Still no cloud seemed to threaten us, but we hurried on very quickly.

"On arriving at the col, just above the great rock tower, we turned down a little gully on the west face. Here, though the work was exceedingly difficult, we lost no time whatever, and undoubtedly we chose the best route. The storm, meanwhile, had crossed over the east Arolla ridge, and we saw the lightning flashing about the Aiguille de la Za and Dent Perroc, and the clouds, as they advanced, grew more and more angry looking.

"We were advancing as quickly as the nature of the ground would allow on a buttress which supports the great tower on the west. It was then about six o'clock. We had, at the most, only 150 feet of difficult ground to get over, when a dark and dense cloud fell upon us, and it became, suddenly and almost without any warning, prematurely dark. Our axes emitted electric sparks, or rather faint but steady little flames, on both the adze and pick part; so also did our gloves, the hair of which stood out quite straight. A handkerchief, which I had

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tied over my hat, was like a tiara of light. This was very uncanny, but still deeply interesting. The sparks, when touched by the bare hand or the cheek, gave out no heat. There was no hissing to be heard on our axes or on the rocks, but Solly felt a sort of vibration about the spectacles which were on his forehead that he did not at all like, so he put them under his hat.

“Under ordinary circumstances we should have put away our axes until the storm should have passed away. Of course we did not do this, nor indeed would any other member of the Alpine Club have done so if he had had the good fortune to be with us. We wished to get across the 150 feet which was the only difficulty yet remaining before us. Each one of us was quite capable of undertaking the work, and, in spite of the unusual darkness, we had sufficient light for the purpose.

“Solly was leading across a difficult bit of rock, and clearing away the ice; Haskett-Smith was paying out the rope as required; I was perched firmly at the bottom end of a narrow and steep ledge round the corner of a crag above them with the rope firmly hitched. We were all working steadily and most carefully, and hoped in a few minutes to clear our last difficulty. All at once the whole mountain side seemed to be ablaze, and at the same time there was a muzzled, muffled, or suppressed peal of thunder,

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apparently coming out of the interior of the mountain—so much so that, if a great crevice had been opened in the rocks and fire had burst out from it, we should hardly have been more surprised than we were. Solly and Haskett-Smith each exclaimed, 'My axe was struck,' and each of them, naturally enough, let his axe go. Where to none knew. Solly, describing this, says, 'At the moment I was standing with my face towards the mountain, with my right arm stretched out, feeling for a firm foothold with my axe, which I held just under its head. For perhaps a minute the lightning was coming very fast; then came the noise, and I saw a curve of flame on the head of my axe. I involuntarily let it go. The whole place seemed one blaze of light, and I could distinguish nothing. The thought that rushed through my mind was—Am I blinded? the intensity of the light was so terrible. It is difficult to put such events in any order of time; but I think the noise or explosion came first, before the blaze of light, and the light seemed to flicker as if a series of flashes were coming. I hardly know whether my body or any part of my clothing was actually struck. My axe certainly was, and I think the rocks just by me were.'

"Haskett-Smith said that his neck was burnt, and we saw later that a dark-brown band, an inch and a quarter wide, had been burnt exactly half way

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round his neck. I was untouched. All the sparks disappeared with the flash.

"Now the matter was serious enough, as we had only one axe, and we felt that we had had a most providential escape. There is little doubt that, if this had occurred upon the crest of the ridge above us, the electric current would have been much stronger, and the consequences much worse.

"My two companions then climbed up to the little ledge where I was sitting, to wait at least until the storm should pass away. Whilst Solly was doing this, a tremendous gust of wind swept up from the N.W., and nearly carried him off his feet.

"The storm lasted much longer than we expected it to do, and by the time it had vanished it was quite dark. All climbers will readily agree with me when I say that the storm, seen from such a point of view, where the mountain forms are so wild, and their guardian glaciers so vast and glittering, was indescribably grand—so much so that, even under our circumstances, there was a kind of grim enjoyment which we could not help feeling.

"I put my axe upon a higher ledge for safety's sake. When the storm had gone by we took stock of our goods. Solly had a lantern. We each had two shirts, scarfs, and unusually warm clothing. We had plenty of food, some cold tea, and a flask of brandy. We knew well that we must stop where we were until

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morning. It was hard luck certainly, as there was only one narrow prison moat between us and freedom. Once over these 150 feet, we could have reached the Stockje by lantern light. Of this I am certain. But no man living could cross the moat except in daylight.

"Haskett-Smith, who is a marvellous man for making all sort of hitches, knots, and nooses, managed to get a capital hitch for our rope, and lashed us to the rock most skilfully. The ledge was steep, and varied from $1\frac{1}{2}$ to 2 feet wide. As we could not sit back to back, which is the best plan when possible, we did the next best thing, and sat, squatted, or leaned, face to back. Solly, who sat at the bottom, had a loose piece of friable rock which supported one foot. I was in the middle, with my knees up to my chin, on a steep slope, but was supported by Solly's back and by a singularly sharp little stone on which I squatted. Haskett-Smith leaned with his back against a corner, and with his knees against my back. Each of us had a rucksack, which helped to keep out the cold. We made a good meal of potted meat, bread, chocolate, and an orange, and left a box of sardines and other food for the morning.

"Several short but heavy snow and hail showers fell after the thunderstorm had subsided, but we were thankful that there was no rain. The wind got up too, and whistled wildly through the crags above us.

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Fortunately, a screen of rock above our ledge partly sheltered us. We faced a grim and grisly little pinnacle on the west face of the mountain, which became, hour after hour, if possible, more ghostly. How we did hate it, to be sure. A light in a chalet near Ferpécle shone like a beacon for some hours, which was a pleasant contrast to the near view of the ghost, but it seemed to be a terribly long way off. We kept up our spirits capitably, and from previous experience I, at least, knew how thankful we ought to be that no member of our party was of a pessimistic turn of mind. At the same time, we were fully aware how serious the matter was, but we were determined to get well through it, helped, we trusted, by a power not our own.

“Our greatest trouble during the night arose from the consciousness that Mr Schuster, Herr Seiler, and other friends at Zermatt would be very anxious about us, and we often spoke of it with regret.

“We were most careful to keep moving our hands and feet all the night, and, though the temptation to indulge in sleep was very great, we denied ourselves this luxury. After two o'clock an increased vigilance was necessary, as the sky became clearer, and the cold much more intense. Mr Aitkin's guides, who were then bivouacking above the Stockje, ‘complained much of the cold.’ We probably suffered less than they did, as, at our great altitude, the air

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was doubtless much drier than below. At the same time, gentlemen who were occupying comfortable beds in luxurious hotels in the Vispthal thought the night was unusually warm. Haskett-Smith imagined the whole night that Solly was another member of the A.C., and invariably addressed him by the wrong name. This hallucination was, no doubt, the result of the electric shock.

"Shortly before 5 A.M. we opened our sardine-box, which was no easy task, as our outer gloves were like iron gauntlets. We made a good meal of petrified fish, frozen oranges, and bread. We avoided our brandy-flask like poison on the whole expedition.

"We soon discovered the lost axes below us, half embedded in hard snow. Then we began to move. Solly took my axe, and with much difficulty, and at the expense of a good deal of time, cut down to and recovered one of the missing ones. We found, however, that it was then far too cold, and we were too benumbed to work safely, so we returned to our ledge again until eight o'clock. Long before this hour the ghostly pinnacle was gilded by the morning sun, and, if possible, we hated it more than ever, as no warm rays could reach the place where we were for hours to come. On telling several of the leading guides in Zermatt about waiting until eight o'clock on the ledge, they all said that it was quite

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early enough for us to move after spending a night out in the cold, and that they had done exactly the same under similar circumstances. We were sure we were right; still their testimony is valuable. Messrs Kennedy and Hardy, when they had their 'Night Adventure on the Bristenstock,' say they were 'obliged to stamp about for some twenty minutes in order to restore circulation, or we should not have had sufficient steadiness to have continued our descent in safety.' Well, these gentlemen had neither waistcoats nor neckties, and had only a lump of bread and one bottle of wine. We were at least well fed and warmly clad, but we had no room to stamp about. Having now two axes, we were able to work again with renewed confidence in our powers. We saw the third axe lying half imbedded in the snow a long way below us, and about a rope's length from some firm rocks. The hail and snow, which had partly covered the rocks, increased the difficulty, and the ice in which we had to cut steps was unusually hard. In fact, our 150 feet were gained with much difficulty, and, by the exercise of great caution and severe labour, at last, after much time and manœuvring, we recovered the third axe, and were indeed happy.

"Two minutes later we stood in bright sunshine, and such was its invigorating power that in ten minutes all our stiffness had vanished. My hat

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blew off here, and rolled on its stiffened brim at a tremendous pace down a couloir of ice. Fortunately, I had a woollen helmet which Miss Richardson had knitted for me. We hastened on very quickly in order to relieve, as soon as possible, the anxiety which we well knew our friends at Zermatt were enduring.

"When on the snow ridge between points 3912 mètres and 3729 mètres we heard voices far below us on the west, and soon saw what we knew afterwards to be Mr Aitkin, Imboden, and a porter. They had abandoned their intention of climbing the Dent Blanche 'on account of bad weather.' Indeed, Miss Richardson, who had spent the night at the Stockje, was told by Imboden that 'in such weather it would be impossible, and probably would remain so for a day or two; therefore, they might as well go to Ferpécle and do another col the next day.'

"Seeing that the party were above the route to Ferpécle, we knew at once that they were looking for us. Imboden shouted out to us, 'Where do you come from?' We pointed to the Dent Blanche, and they immediately turned towards Zermatt, and we only missed them by about five minutes at the usual breakfast place.

"Now, as we knew that there was no need for us to hurry, we rested, and made a most hearty breakfast, as we had left on the rocks a whole chicken, some ham, bread, plums, and a bottle of white wine.

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"On crossing the glacier to the Wandfluh rocks our axes and rucksacks hissed like serpents for a long time, while we saw in the distance the storm which overtook Mr Macdonald on the Lyskamm that very morning ; and none of us liked the renewal of electric energy, which may well be believed. A heavy mist also threatened us. Mr Aitkin had a similar experience to ours.

"We descended by way of the Wandfluh, and above the Stockje untied the rope which we had had on for thirty-eight hours ; and such is the virtue of the Alpine knot that we were as firmly tied at the end of this time as we were when we first put on the rope.

"On the Zmutt Glacier we bathed our hands repeatedly in the glacier pools as a safeguard against possible frost-bites with entirely satisfactory results. On the glacier we were delighted to meet Mr E. T. Hartley, who welcomed us most warmly, and told us of the anxiety of our friends ; he, however, and one good lady in Zermatt said all the time that we should return safe and sound again. Just off the glacier we met three porters provided with blankets and provisions sent by the kind thoughtfulness of Mr Schuster and Herr Seiler.

"We rested at the Staffel Alp, where we had some most refreshing tea, and reached Zermatt in the evening."

CHAPTER X

ALONE ON THE DENT BLANCHE

I AM indebted to Mr Harold Spender, the author of a fine description of the accident in 1899 on the Dent Blanche, for permission to reprint the greater portion of it, and also to the proprietors of *McClure's Magazine* and of *The Strand Magazine*, in which publications it first appeared. The safe return of one of the party is alluded to in *The Alpine Journal* as one of the most wonderful escapes in the whole annals of mountaineering.

"Mr F. W. Hill, whose narrative in *The Alpine Journal* necessarily forms the best evidence as to the incidents, says that it was Glynne Jones who wanted to climb the Dent Blanche by its western *arête*—a notably difficult undertaking, and one that has probably only twice been achieved.

"Glynne Jones had discussed the possibilities of the undertaking with his own guide, Elias Furrer, of Stalden, and they had come to the conclusion that the conditions were never likely to be more favourable than in this August of 1899. Glynne Jones,

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therefore, asked Mr Hill to accompany them, and to bring along with him his own guide, Jean Vuignier, of Evolena. Both guides knew their climbers very well; for Furrer had been with Glynne Jones on and off for five years, and Vuignier had climbed at Zermatt with Hill the year before. But Mr Hill, who had promised to take his wife to Zermatt over the Col d'Herens, refused to go. Glynne Jones accordingly secured a second guide in Clemens Zurbriggen, of Saas-Fée, a young member of a great climbing clan. Vuignier, however, was so disappointed at his employer's refusal, that Mr Hill, finding that his wife made no objection, finally consented to join the party. Thus, with the addition of Mr Hill and his guide, the expedition numbered five members. They left Arolla on Sunday morning, 27th August, with a porter carrying blankets. They intended to sleep on the rocks below the *arête*. Arriving at the Bricolla châlets, a few shepherds' huts high up the mountain, at four in the afternoon, they changed their minds, sent the blankets down to Arolla, and slept in the huts.

"They started at three o'clock in the morning in two parties, the first consisting of Furrer, Zurbriggen, and Jones, roped in that order, and the second of Vuignier and Hill. They crossed the glacier and reached the ridge in good time. 'It was soon very evident,' says Mr Hill in his narrative, 'that the

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climbing was going to be difficult, as the rocks were steep slabs, broken and easy occasionally, but, on the whole, far too smooth.' Rock-climbers do not particularly care how steep a rock may be so long as it is broken up into fissures which will give hold to the feet and hands. In the steepest mountains of the Dolomite region, for instance, the rocks are thus broken, and therefore mountains can be climbed easily which, from their bases, look absolutely inaccessible.

"As they progressed up and along the ridge the climbing became more and more difficult. They had to go slowly and with extreme caution, and often they were in doubt as to the best way to proceed. Sometimes, indeed, there seemed no possible route. In these places Furrer, who seems to have been accepted as the leader of the party, would detach himself from the rope and go forward to find a passage.

"On entering upon this part of the climb the two parties had joined ropes, and were now advancing as one, and roped in this order—Furrer, Zurbriggen, Glynne Jones, Vuignier, and Hill.

"It is evident that between nine o'clock and ten climbing had become exceedingly arduous. 'In two or three places,' says Mr Hill, 'the only possible way was over an overhanging rock up which the leader had to be pushed and the others helped from

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above and below.' This gives us a graphic picture of the nature of the climb. Nothing is more fatiguing than to climb over a rock which is in the least degree overhanging. Mr Hill tells me that Furrer showed him his finger-tips at breakfast-time—9 A.M.—and that they were severely cut.

"Yet no one must imagine for an instant that the party was in the least degree puzzled or vexed. There is nothing so exhilarating as the conflict with danger, and it generally happens in climbing a mountain that the party is merriest at the most difficult places. Mr Hill, indeed, tells us that they were in the 'highest spirits.' 'Climbing carefully,' he says, 'but in the highest spirits, we made good progress, for at ten o'clock it was agreed we were within an hour of the summit.' It was at this point and time that the accident occurred.

"They had been forced below the ridge by the difficulty of the rocks, and had come to a place where their obvious route lay up a narrow gully, or sloping chimney. On an ordinary day it is possible that they would have found no difficulty in going forward, but a few days before there had been rain, and probably snow, on these high rock summits. At any rate, the rocks were 'glazed'; covered, that is, with a film of ice, probably snow melted and re-frozen, just sufficiently thick to adhere, and sufficiently slippery to make the fingers

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'slither' over the rocks. If the climber cannot clear away the ice with his ice-axe, he must go round another way, and if the rocks are steep the first course becomes obviously impossible. That was the condition of affairs at ten o'clock on the morning of 28th August 1899.

"In a party of five roped together, with 30 feet of rope between each member, the amount of space covered by the party will obviously be 40 yards; and it frequently happens that those who are roped last cannot see the leaders. Mr Hill, as we have seen, was roped last, and by the time he reached the level of the other climbers Furrer had already turned away from the gully and was attempting to climb to the ridge by another route. To the left of the gully in front of them was a vertical rock face stretching for about 30 feet. Beyond this was a smooth-looking buttress some 10 feet high, by climbing which the party could regain the ridge. When Hill came up with the rest, Furrer was already attempting to climb this buttress.

"But the buttress was quite smooth, and Furrer was at a loss to find a hold. Unable to support himself, he called to Zurbriggen to place an axe under his feet for him to stand on. In this way he might be able to reach with his hands to the top of the buttress. There was nothing unusual in this method of procedure. In climbing difficult rocks,

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when the hand-holds are far up, it is frequently the custom to help the climber by placing an ice-axe under his feet. But in this case Furrer discovered that he could not climb the buttress with the help of Zurbriggen alone, and he would probably have done more wisely if he had abandoned the attempt. But, instead of that, he called Glynne Jones to help Zurbriggen in holding him up.

“‘Apparently,’ says Mr Hill, ‘he did not feel safe, for he turned his head and spoke to Glynne Jones, who then went to hold the axe steady.’

“From Mr Hill’s own explanations the situation was as follows: The leading climber, Furrer, was grasping the rock face, standing on an ice-axe held vertically by Zurbriggen and Glynne Jones. These two were forced, in order to hold the ice-axe securely, to crouch down with their faces to the ground, and were, therefore oblivious of what was going on above them. But the important point is, that their four hands were occupied in holding the ice-axe, and that as they were standing on a narrow ledge, with a very sharp slope immediately below, these two men were in a helpless position. They were unready to stand a shock. Thus, at the critical moment, out of a party of five climbers, three had virtually cast everything on a single die!

“Mr Hill, standing level with the rest of the party, could see quite clearly what was happening. He

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was about 60 feet distant from them, the guide Vuignier being roped between them at an equal distance of some 30 feet from each. Furrer could now stand upright on the axe, which was firmly held by four strong hands, and could reach with his own fingers to the top of the buttress. It was a perilous moment. It is the rule with skilled climbers that you should never leave your foot-hold until you have secured your hand-hold. The natural issue would have been that Furrer, finding it impossible to secure on the smooth rock a steady grip with his hands, should have declined to trust himself. But the science of the study is one thing and the art of the mountain another. There are moments when a man does not know whether he has secured a steady grip or an unsteady, and the question can only be answered by making the attempt. If the party blundered at all, it was in allowing the second and third men to be so completely occupied with holding the axe that there was no reserve of power to hold up Furrer in case of a slip. But it is easy to speak after the event.

“What Hill now saw was this: He saw Furrer reach his hands to the top of the buttress, take a grip, and attempt to pull himself up. But his feet never left the ice-axe beneath, for in the process of gripping his hands slipped. And then, as Hill looked, Furrer’s body slowly fell back. It seemed, he has told him-

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self, to take quite a long time falling. Furrer fell backwards, right on to the two oblivious men beneath him, causing them to collapse instantly, knocking them off their standing-place, and carrying them with him in his fall from the ridge. 'All three,' says Mr Hill in his narrative, 'fell together.' Instinctively he turned to the wall to get a better hold of the rock, and therefore did not see the next incident in the fatal sequence. Vuignier, as we have seen, was standing 30 feet from the first three, and the weight of three human bodies swinging at the end of the rope must have come directly on him. He was, apparently, taken by surprise, and immediately pulled off the rock. Hill heard that terrible sound—the scuffle and rattle of stones that meant the dragging of a helpless human being into space—and he knew, or thought he knew, that his own turn would come in a moment; but as he clung there to the rock, waiting for the inevitable end, there was a pause. Nothing happened.

“After a few endless seconds of time he faced round and found himself alone. Looking down, he saw his four companions sliding down the precipitous slopes at a terrific rate, without a cry, but with arms outstretched, helplessly falling into the abyss. Between him and them, and from his waist, there hung 30 feet of rope swinging slowly to and fro. The faithful Vuignier had probably fastened the

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rope securely round some point of rock to protect his master. The full weight of the four bodies had probably expended itself on the rock-fastening of the rope, and thereby saved the life of the fifth climber. Dazed and astonished to find himself still in the land of the living, Mr Hill stood for some time watching his comrades fall, until, sickened, he turned away to face his own situation.

"It was not very promising. He was without food, drink, or warm clothing. No man alone could climb down by the ridge up which those five experts had climbed in the morning. And in front lay a difficulty which had already destroyed his friends when attempting to overcome it by mutual help. It seemed impossible.

"Perhaps it was fortunate that Hill was not only a mathematician, but a man of characteristic mathematical temperament—cool, unemotional, long-headed. Most men in his situation would have gone mad. Some would have waited right there till starvation overcame them or a rescue party arrived. But there was little or no chance of a rescue party, and Mr Hill was certainly not the man to wait for starvation. It was a curious irony that probably at that very moment there was a party on the summit of the Dent Blanche. Mr Hill's party had seen two climbers on the south *arête* at half-past eight o'clock, and again about an hour later. At this moment

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they were probably at the summit. But Mr Hill had no means of communicating with them, and the hour's climb which lay between him and them might as well have been the length of Europe. An hour later he himself heard a faint 'cooey' (the party were probably on the way down)—a jovial, generous hail from men unconscious of any catastrophe.

"Mr Hill's immediate task was to regain the ridge and reach the summit. At the moment of the accident he was some 60 feet from the fatal buttress, and now wisely made no attempt to get near it. Instead, he moved to circumvent the glazed gully from its other side. After long and tedious efforts, lasting for a period of time which he cannot now even approximately estimate, he succeeded in his flanking movement, and finally, with great labour and peril, climbed back to the ridge by a slope of frozen snow and ice broken with rocks. It would be difficult to imagine anything more terrible than this lonely climb over ice-covered rocks, the painful cutting of steps up an almost precipitous wall, with a precipice many thousand feet deep at his back, down which the smallest slip would send him to certain death. But at last he regained the ridge, and the difficulties of ascent were now mainly overcome. In about another hour he found himself on the summit—a solitary, mournful victor. It was there he heard the shout from the

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other party. But he could not see them or make them hear, and so he made his way down with all reasonable speed, hoping to overtake them.

“Hill had climbed the Dent Blanche in the previous year with a guided party, and therefore, to some extent, knew the route. Without much difficulty he was able to follow the ridge as far as possible down to the lowest *gendarme*, a pile of rock with a deep, narrow fissure. Then a sudden mist hid everything from view, and it was impossible to see the way off the *gendarme*. He tried several routes downward in the mist, but at last wisely resolved to wait till it lifted. While he was searching, a snow-storm and a cold wind came up. ‘They drove me,’ says Mr Hill in his plain way, ‘to seek shelter in the lee of the rocks.’ There he tied himself with his rope, and, to avoid the danger of falling off in a moment of sleep, still further secured himself by an ice-axe wedged firmly in front of him—poor protections to a man absolutely without food or wraps, clinging to the side of an abyss in the searching cold and stormy darkness of mist and snow, wedged under the eave of an overhanging rock, and only able to sit in a cramped posture. But Mr Hill was no ordinary man. If the Fates were asking for his life he determined to sell it dearly, sustained in his resolve by the

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thought of that waiting wife, unconscious of ill, below in Zermatt.

"It must have been, at this time, past mid-day on Monday, 28th August.

"The storm lasted all that Monday, and Monday night, and Tuesday morning. All through those dreadful hours of darkness Hill sat in the cleft of rock, sleeping most of the time, but always half-frozen with the cold, and whenever he awoke obliged to beat himself to regain his natural warmth. Happily, he was well protected against the falling snow by the eave of the overhanging rock, but it covered his knees and boots, causing him intense cold in the feet.

"At last, at mid-day on Tuesday, the mist cleared and the sun shone again in a sky of perfect blue. He could now resume his descent. To climb over snow-covered rocks in a roped party is difficult enough, but to do it alone is to risk your life many times over. But there was no alternative.

"At last the rocks ended and the worst of the peril was over. He had reached the snow *arête*, where not even the heavy fall of snow had quite obliterated the tracks of those who had gone in front of him. These helped him to find his way. But the steps had mostly to be recut, and that must have been very fatiguing after his previous experiences. The next difficulty was the lower part

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of the Wandfluh, a bold wall of rock which leads down first to the Schonbuhl and then to the Zmutt Glaciers, and which, at its base, ends in a steep precipice that can be descended only by one gully. Here Mr Hill's memory failed him. He could not remember which was the right gully. This was, perhaps, the most terrible trial of all. If he could find that gully his task was almost accomplished. The rest of the descent to Zermatt is little more than a walk. But hour after hour passed; he descended gully after gully, only to find himself blocked below by one precipice after another. In one of these attempts he dropped his ice-axe, without which he could never hope to return alive. Unless he could recover it he was a dead man. But, no, it was not quite lost. There it lay, far below him, on the rocks. Slowly and painfully he descended the gully to fetch it. At last he reached it. In this quest he wasted a whole hour!

"At last he discovered a series of chimneys to the extreme right of the Wandfluh and leading down to the glacier. Letting himself down these steep chimneys, he found himself at last, on Tuesday evening, on the high moraines of the Zmutt Glacier. He must have reached the glacier about six o'clock, but he had only the sun to reckon by. Here the steep descent ends, and there is but a stony walk of two and a half hours down the glacier by a path

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which leads to the Staffel Alp Inn. The sun set while he was still on the moraine, and he has a vivid recollection of seeing the red 'Alpengluh' on Monte Rosa. But as the darkness grew it became more and more difficult to keep to the path.

"Here at last his marvellous strength began to fail him. He had no snow-glasses, and his eyes were suffering from the prolonged glare of the snow. A sort of waking trance fell on him. As he stumbled forward, over the stones of that horrible moraine, he imagined that his companions were still alive and with him. He kept calling to them to 'come along.' 'It is getting late, you fellows,' he shouted; 'come along.'

"At last he was brought up by a great rock. In the darkness he had wandered below the path. The rock entirely barred his way. He had a vague illusion that it was a *châlet*, and wandered round it searching for a door. At last he settled down by it in a semi-conscious condition. Then he must have fallen asleep, probably about ten o'clock. The sleep lasted about twelve hours, and was better than meat and drink. To most men it would have ended in death.

"When he woke up at ten o'clock on Wednesday morning, in broad daylight, he soon saw that he had been sleeping quite near the path. A few minutes' scramble brought him back to it, and he

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soon came to a little wooden refreshment-house, about an hour below the Staffel Inn, which he had passed in the darkness. He went up to the woman at the hut and asked for some beer! He had only fifty centimes in his pocket; one of his dead companions had held the purse. He volunteered no complaint; but the woman was sympathetic, and soon found out whence he came. She then gave him a little milk and some dry bread—all she had. After a short rest he resumed his way to Zermatt, distant about half an hour, and reached the village at 11.30. As he was walking down the main street past the church he met his wife.

“He told her simply what had happened. Then he had lunch. ‘I was now ravenous,’ he says, ‘and devoured a beefsteak, with the help of a glass of whisky and soda, and a bottle of champagne.’ Within an hour or two he was entirely recovered.”

CHAPTER XI

A STIRRING DAY ON THE ROSETTA

AMONGST the many rock scrambles in the neighbourhood of St Martino in the Dolomites of Tyrol, the Rosetta when ascended by the western face can be counted on to awaken an interest in the most stolid of climbers. I am indebted to the courtesy of a girl friend for the loan of her mountaineering diary, and permission to make extracts from its very interesting contents, of which her account of an ascent of the Rosetta will, I feel sure, be read with keen enjoyment by climbers and non-climbers alike. That a young English girl on her first visit to the mountains should carry out with such success so difficult an expedition, is much to the credit of both herself and her guides. Her brother accompanied her, and the climb took place on 10th August 1898.

“A cautious bang at my door, a faint ‘Si!’ from me, and steps departing. Then I lit a candle and dressed. But it was the critical moment when the dawn comes quickly, and I



AMBROSE SUPERSAX.
(P. 209.)

To face p. 182.



FROM THE ROSETTA.
By Signor Vittorio Sella.

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blew it out in five minutes and watched the blue light brighten on the dusky outlines of the white church and houses. The Cimone was growing pink as I got on my heavy hob-nailed boots, and, taking my tennis shoes also, I tramped softly down to breakfast. Bettega, our leading guide, was there, with his cordial smile and hand-shake, and G—— and Tavernaro soon appeared. We were off before long, taking with us a porter in addition to the two guides, and G—— and I let Bettega see plainly that we thought this a little superfluous, but later on we were glad we had him. I must admit that I never met such good-natured and thoughtful guides, nor such excellent ones. After passing through forest, we had to ascend up steep shingle, and as this steepened I reeled a little, my feet being not as yet well used to this sort of work. Bettega, however, put his hand behind him, I crooked my fingers into his, and that gave me all the balance I needed. Finally we crossed some snow, and sitting on a little platform under a towering rock, we perceived that the way we were to ascend the Rosetta would be a very different experience to the climb by the ordinary route.

“At this point I took off my skirt, and removed my boots, putting on tennis shoes instead. The rubber soles of these are far safer than nails on the smooth and slabby Dolomite rock.

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"The guides jabbered between themselves; Bettega smiled sublimely and looked utterly in his element, but Tavernaro seemed rather subdued; he is under the moral influence of Bettega, for though Tavernaro may have more education and cleverness he rounds upon his comrade at times owing to his excitable disposition. But on the mountains he slinks at Bettega's elbow, as the two roll along with the peculiar mountaineer's bending stride on level ground, and Tavernaro never asks a price or arranges for an excursion without consulting Bettega. But, on the other hand, Bettega lives in fear of Tavernaro's lively tongue, so it is about balanced!

"Having finished our meal, we set off. I was roped to Bettega, who led. After about five minutes Bettega, who till then had held in his hand all the rope we were not using, dropped it in a big coil, and told me to 'Remain firm' where I was. He then climbed upwards for a few minutes, but I did not watch, for though my head had not swum at all as yet, I wasn't too sure of it, and the rock face was very sheer, so I neither looked up nor down, but sat with my cheek against the rock and held on! But all went merrily. Tavernaro occasionally placed one of my feet, which was placeless, and we got up the first *camino*, or rocky chimney, fairly well. 'Wait a moment, signorina,' said Bettega, and then

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he disappeared overhead—literally disappeared, for he was quite hidden when he cried cheerily, ‘Come! Come!’ I got up, and found a very small *posto* or tiny platform on which to wait, with a disagreeably obtrusive precipice below it. Above was a second *camino*, which looked smooth and gloomy. I leant affectionately against the rock, pondering deeply of anything except ‘empty space.’ ‘The signorina is all right there?’ enquired Bettega solicitously. ‘To be sure she is!’ cried Tavernaro gaily, as he leant over me against the rock. Then up clomb Bettega, and G—— advanced slowly and surely from below. As the minutes went by I shut my eyes, and was gloomily thankful when the summons came from above. Looking up, I could just see Bettega’s bushy black head and flannel cap couched amongst the rocks. Fifteen feet up the *camino* a big stone was wedged, and between this and the back of the chimney one had to pass, emerging above at the top of the wall. G—— having now reached the *posto*, I began to go up, with Tavernaro closely following me. Bit by bit I climbed; a grab, a hoist, a foot tucked into a crevice on either side of the *camino*, a long reach with my arm, a steady pull—and likewise, it must be confessed, a pull from the rope!—and so up, up again. The rock wall was abominably straight and holeless. Under the stone, with the three members placed on ledges or in cracks, I in

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vain sought a point of rest for the fourth before hauling. 'Good heavens!' I exclaimed in melancholy undertones, and a gurgling chuckle from below showed that Tavernaro sympathised. 'Here you are, signorina,' he said, giving me his shoulder for a momentary foot-hold. With that instant of support I swung up on to the stone, and so to the next *posto sicuro*, or safe spot. G—— came up without help, but he assured me that it was a really hard place.

"Of course I don't pretend I did it all myself. Quite half a dozen times I doubt if I could have got up without material aid from the cord, or from Tavernaro below. Once, in a *camino*, the latter gave me a butt with his head, which made me reflect how great a man was lost to the game of football, while the way he placed my feet was a great help to one who, as a novice, had not yet learnt to study the foot-holds in advance.

"We now reached a place where a third *camino* ran up above us, while an awkward traverse led to another on the right. Here I heard Tavernaro remonstrate with Bettega on the route he had taken, but the latter said, very decidedly, that he intended going straight on, so Tavernaro, as usual, subsided, but became very quiet. He had never before ascended this *camino*, which was a discovery of Bettega's, but no doubt he had heard about it.

"We began to climb it, Bettega first and I following

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him closely. It had rained heavily the previous day, and all the loose stones had been washed to the very edge of the ledges. Not having been cautioned about these, and intent on getting up, I let several fall. 'Hi! Gently with the stones!' gasped Tavernaro from below, and when he reached my side I saw that his knuckles were bleeding. 'Have you hurt yourself?' I enquired. 'No, it is you who have done it, and you've twice nearly killed your brother,' he replied, but G—— told me to tell Tavernaro he had sent down a much worse stone than any of mine, whereat he looked resigned, and remarked, 'Oh, yes, these things can't always be avoided.'

"'Stay quietly where you are, and wait till I tell you to come on,' Bettega now remarked. I crouched in a very narrow chimney for a little, watched not—a hundred pities—and heard Bettega go up beyond. Not more than three minutes elapsed before his deep voice sang out: 'Now, come up!' and though I replied: 'I'm coming,' I wondered how I was to do it. We were near the top of the chimney. Further up, it became too narrow for any human form to squeeze into. One had therefore to come out of it to the right and climb up and over a huge bulging mass of rock about 15 feet high, which overhung the precipice. This mass of gently bulging rock was worn smooth by rain and stones. There was no proper foot-hold, hardly the tiniest crack. *How*

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had Bettega managed it? I got up the cold, damp chimney as far as I could, leant gasping against the rock, and felt near the end of my courage. Tavernaro was stowed away yards below, G—— also out of sight, Bettega invisible above. There was just the cord, pulling me away from the inhospitable rocks, and at my very heels an abyss of 2000 feet. I made one bold grab on the smooth wall, but speedily retired to the end of the *camino*, and feebly yelled, 'Wait! Ah, I can't do it!' 'All right! Catch hold of this cord!' came the answer, and a loop of rope was let slowly down. I seized it, contrived to get one foot on to a tiny, weeny point, came out of the chimney, and heard Bettega call, 'To the right, signorina!' 'To the right; that's all very well!' I muttered fiercely, and felt my hand slipping; my foot gave, my fingers ran down the rope, the cord round my waist tightened, I pushed my arm through the loop of the free rope with one last effort, and then finding no support of any kind for my feet, was ignominiously pulled, kicking, up the precipice by Bettega, who, firmly fixed with both feet against rocks, hauled me up most joyously hand over hand.

"'But, Michele, how did *you* manage to get up?'" I panted, as I sank on a ledge, and gazed in awed admiration at him. 'Well, not like that, signorina!' he said, with his honest laugh; 'I really came up

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by pressure. There are no hand-grips, so you have to do without.' 'It's marvellous! It's stupendous!' murmured I, really awed by the man's power. Then we both listened for Tavernaro's coming, and a proper little comedy, for us two at least, ensued. Of course one could see nothing, the rock bulged too much, but one could hear Tavernaro's voice some 20 feet below, as he groped about, swearing softly. Five minutes went by and all was still, so Bettega began haranguing him. 'More to the right, Tony; you must come out, don't go too high in the chimney!' Then—'Look out, Tony, I'll send you the rope-end!' But an ominous '*No*,' quickly answered this proposal. A guide's honour is very sensitive on this point. Another three or four minutes passed. 'How is Tavernaro getting on?' I whispered, and Bettega replied, smiling broadly, 'He wishes to try.'

"Some gasps from the direction of the chimney were now heard, and Bettega again expostulated gently. 'Look here, Tony, we are old friends; take the rope!' '*No*,' in gloomy defiance. 'Oh, if we were alone it would be different, but we must not keep the rest of the party waiting, and the signorina may take cold.' This was all in *patois*, but I caught some of it, and here struck in quickly, 'Oh, not at all!' Bettega looked surprised, and resumed more energetically his exhortations to Tony to pocket

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his pride and accept the loop of rope. At last Tony, who must have been within 10 feet of the top and so at the worst spot, suddenly jerked on to the proffered cord, and was up the next moment, hatless, with huge beads of sweat on his forehead and his black hair as straight as matches. There was a great rent in the side of one of his hands, which bled profusely. What struck me most, however, was the expression of suffering and shaken confidence on his face. Tavernaro ranks only second to Bettega and Zecchini, and was asked to go to the Caucasus and other distant mountains. He just stumbled to a safe spot, wrung his left hand, and panted out, 'Jesu Maria! it was cruel!' I fear that Bettega's smile was more triumphant than sympathetic. Nevertheless, he enquired kindly for Tavernaro's hand, but for fully two minutes the latter's loquaciousness was lost. The look of anguish on his face meant, I think, that he had seen death pretty near to him. He told us that he went far too much into the crack on the left, and had remained sticking in it till his hands got so cold he feared he would lose his grip. If he had, he was lost, and probably G—— also, so he had actually held on with his head and left his cap jammed in the crack. I called to G—— to hook the rope over a point of rock in case Tavernaro fell, and this he had done, but even

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so the frightful jerk might have torn him down, and in any case Tavernaro must have been either killed or frightfully hurt, as he had, I should think, about 30 feet of rope out.

"While I was in the throes of the difficult part, Papa's cap fell off my head, but Tavernaro caught it and brought it up. He was in an awful state of mind about his own cap, which had his guide's badge, etc., on it, and begged me to call down to my brother about it. I did so, but G—— replied several times with some asperity that he had enough to do to get himself up. 'Why can't he bring it up in his mouth?' cried Tavernaro excitedly, and, in the end, G—— brought it in his belt.

"My opinion is that both G—— and Tavernaro ran a great risk, and that Tavernaro was fully aware of it, and, for a few minutes after, was not a little shaken.

"After half an hour at this notable spot Bettega resumed the ascent. 'I hope we shall have nothing more so difficult,' I said eagerly, and Bettega replied soothingly that it became 'much less arduous,' but the chimney we were now in was gloomy and slippery, at best very sheer. The guides had resumed their coats, which they had taken off for the bad bit. At the end of the chimney we came to a high overhanging wall, at the foot of which Tavernaro and I reposed, while Bettega climbed over it and

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disappeared. 'Come!' and I rose wearily. Bettega kept that cord very tight on me, and it certainly, as Tavernaro afterwards said, inclined to pull me to the right, away from the best holds, for the wall was comparatively easy, though perpendicular, and I ought not to have swung out quite free from it! But that is what I did. As I rose from the second grip with the right hand, my muscles suddenly relaxed, I lost hold, gave a sigh to signify 'It's no good!' and swung clear out, dangling over 2000 feet of precipice on a single cord which nearly cut me in two. G—— and Tavernaro were much excited below, suddenly seeing me appear hurtling overhead. Of course, in a moment, I swung in again, grabbed afresh, and with terrific tightening of the rope from Bettega, got up in no time. As I swung in the air, I remember G——, in a curiously calm voice, asking, 'Are you all right?' and Tavernaro crying, 'Don't be afraid, signorina, it's all right!'

"Five minutes later we left the huge iron walls of rock, and emerged suddenly on to the flat. Here one realised what breadth and width meant, as opposed to height and profundity. In two seconds Bettega and I romped to the top, where the cairn of stones marking the highest point rose, and shaking hands heartily I gasped with intense feeling, O Michele, how grateful I am to you! Twice to-day I owe you my life!' a debt he utterly

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disclaimed, remarking that whatever he had done was merely in the day's work, and that on him rested the responsibility of bringing us up that way ; as of course it did. Our porter was waiting for us on the summit, and we sat down there, while Bettega and Tavernaro, still looking impressed, knelt attentively to take off our light shoes and put on our nailed boots instead."

The party descended by the ordinary route, a pleasant change after all the difficult work they had accomplished during the upward climb.

The foregoing account gives what is rare amongst the descriptions beginners usually furnish of anything particularly hard they may have undertaken, for the writer has obviously jotted down, within a few hours of her return, an exact impression of how things struck her during the day. It is refreshing to find some one who admits that at certain points her courage nearly gave out, and at others that her guide had to assist her with the rope, for we know that while the very best climbers have had to train their nerves and muscles before they became what they are, some of the very worst are most ready to exclaim that they never felt fear or accepted assistance, and that a certain mountain up which they were heaved like sacks of corn and let down like buckets in a well is "a perfect swindle; any fool could go up it!" Unluckily, every fool does, and

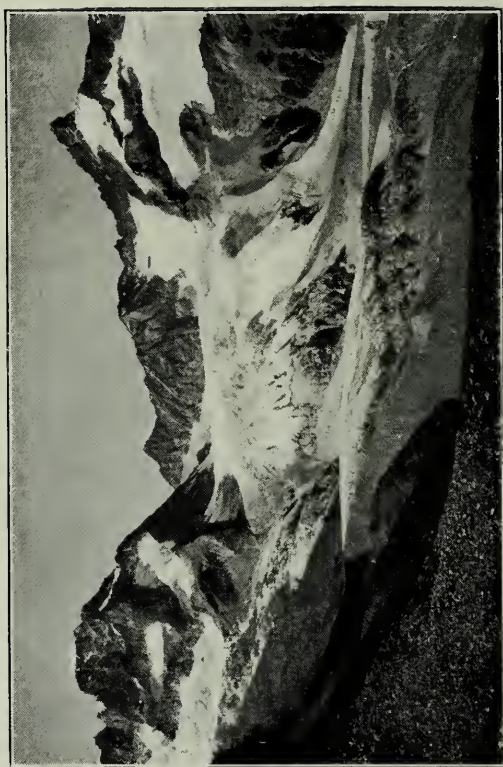
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each one prepares the way for an appallingly increasing death-roll.

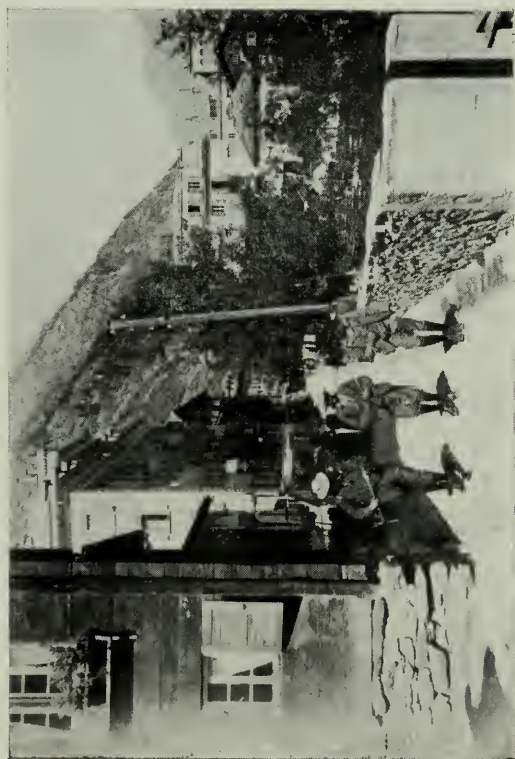
The ascent of the Rosetta by the western face must not be condemned as an imprudent expedition on the occasion just mentioned. True, there was a novice in the party, but she was the only inexperienced member of it. They had ample guiding power, they were properly equipped, and they had good weather. Tavernaro had an offer of help at the critical moment, and availed himself of it when he saw there was real danger. It will be noticed that the four climbers were on two separate ropes. This is usual in the Dolomites, but the majority of experienced mountaineers condemn the practice even on rocks, while on snow it is positive madness. It was owing to this, that, as related in the foregoing narrative, the lady's brother and Tavernaro ran a greater risk than was at all necessary.



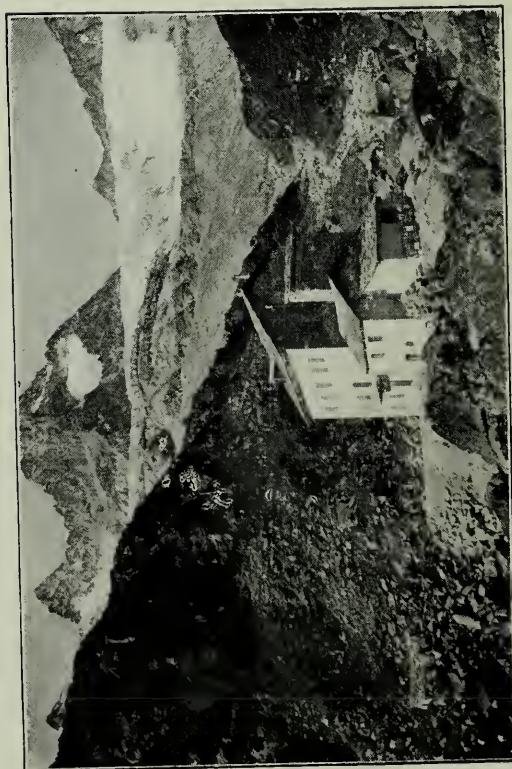
THE GANDEGG HUT, NEAR ZERMATT.



THE ZINAL ROTHORN (to the right) FROM THE TRIFT VALLEY.



A CLIMBING PARTY STARTING FROM ZERMATT FOR THE HUT.



THE TRIFT HOTEL.

CHAPTER XII

THE ZINAL ROTHORN TWICE IN ONE DAY

IGNORANCE of what the future has in store is often not a bad thing. Had I realised that at the hour when we ought to have been at Zinal we should be sitting—and for the second time in one day—on the top of the Rothhorn, we should hardly have set out in so light-hearted a fashion from the little inn in the Trift Valley, above Zermatt, at 4 A.M. on 14th September 1895.

The party consisted of my two guides, Joseph and Roman Imboden, father and son, and myself, and our idea was to cross the fine peak of the Rothhorn, 13,855 feet high, from Zermatt to Zinal. I had been up that mountain before, and so, on many previous occasions, had Imboden, but, oddly enough, he had never been down the other side. Roman, however, had once or twice made the traverse, and, in any case, we knew quite enough about the route from hearsay to feel sure we could hit it off even without Roman's experience.

Some fresh snow had fallen a few days previously,

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and the slabby part of the Rothhorn on the north side was unpleasantly white, besides which there was a strong and bitterly cold wind. We pretty well abandoned all idea of getting down on the other side when we saw how unfavourably things were turning out, and though I felt greatly disappointed I never have and never would urge a guide in whom I have confidence to undertake what he considers imprudent. We left the matter open till the last minute, however, and took both the knapsacks to the top, where we arrived at 9.15.

Warming ourselves in a sunny and sheltered corner of the by no means inhospitable summit, we had some food and a pleasant rest. I cannot say if the meal and the cheering effects of the sunshine made things look different, but it is a fact that after, perhaps, an hour's halt, Imboden shouldered his knapsack and remarked to me, "Come along, ma'am, as far as the end of the ridge; we will just have a look." Hope awakened in me, and scrambling to my feet I followed him. The wind was certainly high; I had difficulty even on those easy rocks in keeping my footing; how, I wondered, should we manage when the real climbing began? I had read of an *arête* of rock, little broader than one of the blunt knives we had used at breakfast, and the idea of passing along it with a shrieking gale trying to tear us from our perch was not alluring. Presently

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we reached the spot where one quits the gentle slope and comparatively broad ridge, and embarks on the profile of a slender and precipitous face of rock, with nearly vertical forehead and small and infrequent cracks for hands and feet. We were going to do more than look at it, apparently; we were about to descend it, for without any further remark Imboden began to get ready, letting Roman pass ahead. Taking hold of the rope between his son and himself he told me to stand aside while he gradually paid it out as Roman went down. The first yard or two consisted of slabs, set at a high angle. Then the ridge abruptly curved over and one saw nothing but air till the eye rested on the glacier thousands of feet below. In a few minutes Roman had disappeared, and the steady paying out of the rope alone indicated that he was climbing downwards. After a time he reached almost the end of his tether of about 30 feet—for we were on a very long rope—and his father called out, "Rope up!" "Let the lady come to the edge and give me a little more," came a voice from far down. Putting the final loop into my hand and bidding me sit down, Imboden held me hard by the cord behind until the tautness of the piece between Roman and me showed it was time to be moving. I then advanced very cautiously to what seemed like the edge of the world. Turning round with my face to the rock I had my first glance below.

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Far down was the top of Roman's hat, and as he saw the advancing soles of my boots he grinned with appreciation, feeling that now we really were embarked on the enterprise. "There's a good place down here, ma'am, come along!" he called up, with one toe on a ledge 3 inches wide, two fingers thrust into a crack, and the rope held out of his way by being put, the remark concluded, between his teeth. I had no doubt it was a nice place when one got there, but meanwhile I had to make the best use I could of my eyes to find a suitable assortment of hand- and foot-holes. Soon I, too, was clinging to the face of the precipice, and Imboden was left above out of sight and before long almost out of hearing. The wind here was far less trying as we were sheltered by the topmost pinnacle of the mountain. To me the feeling of danger from a gale on a rock peak is due even more to the difficulty of hearing what one's companions are saying than to the risk of one's balance being upset. It is extremely disconcerting, when a climber, descending steep rocks and anxious to make a long but perhaps an easy step downwards to good foot-hold, calls for more rope, and is promptly swung clear out into space by an invisible guide above, who has misunderstood his orders. When a party is accustomed to work together, this sort of thing seldom happens, still it makes all the difference

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in the pleasure of negotiating difficult rocks if the air is calm.

Our only trouble now was owing to the fresh snow, but this had partially consolidated, and we got down steadily and safely, gradually leaving behind the cold wind which whistled amongst the crags above.

It was early in the day, and we went slowly, stopping once or twice to photograph where warm and sheltered resting-places of comfortable proportions tempted us to linger. The rocky knife edge was unpleasantly sharp for the arms bent over it, but useful ledges down the side helped to distribute the weight and amuse and occupy the mind. When finally we reached the end of the rocks, and had nothing but snow between us and the Mountet Hut, we considered ourselves as good as there, and made a long halt on the last stones.

We were wrong, however. "My boy, I will go ahead now," remarked Imboden, stepping off into the snow. He went a few paces, and then looked first all round him and lastly at us. "*Blue ice!*" he muttered, with intense disgust. "Blue ice right down to the bottom!" We shrugged our shoulders; Imboden was ahead doing the work; we could afford to be philosophical. I should not like to say how many strokes of the axe each step required, but the slope was steep, a slip could not be risked, and Imboden hewed out great foot-holds in the slippery

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wall. After this had gone on for some time he paused. "Upon my word," remarked he, "it will take us the rest of the day to get down at this rate! I shall try another way." So we turned and remounted the slope, and sitting down once more on the stones, Imboden traced out a possible route down the face of the mountain, bearing diagonally across it. It looked dullish; besides, thought I, after all, we don't particularly want to go to Zinal. Roman put into words what, I think, sprung simultaneously into both our minds. "Let us go back to Zermatt over the top of the Rothhorn again!" "Yes, let us do that!" I exclaimed. Imboden gazed from one to the other of us in amazement. "Go back over the top of the Rothhorn?" he repeated. "Why, we should simply be out all night!" Roman didn't answer, but his eyes wandered persistently up the *arête*. His father now began to calculate, and by some strange process of arithmetic he came to the conclusion that if we hurried very much it was just possible that we might get off the difficult part of the peak before night overtook us. Still, he was far from reconciled to the idea, while every moment Roman and I liked it better. Imboden saw how keen we were, and presently exclaimed: "Well, I'll go if you both want it, but we must be quick; if we spend the night on the top of the Rothhorn and a storm comes on, we may simply lose our lives!"

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There was no need however, to tell Roman to be quick. He was told off to lead, and I followed, with Imboden last. The memory of that ascent has remained in my mind as a confused dream. Every scrap of my attention was given to holding on and pulling myself upwards, never pausing, except in the very worst places, to see what either of the guides was doing, and, with every foot- and hand-hold fresh in my memory, I was full of a delightful sense of security which muscles in first-class condition and complete absence of any sensation of fatigue fully justified. We rose at an incredible pace, and after an hour and twenty-five minutes of splendid exercise, we threw ourselves once more on the flat little top of the Rothhorn. We had now only the descent by the ordinary route between us and Zermatt, and this seemed a small matter compared to what we had accomplished that day.

We did not remain long on the summit, and the first part of the descent was quickly ended. We had now reached that point on the mountain where it is necessary to leave the ridge and go down for some distance on the precipitous north face. This bit of the climb, always requiring great care on account of the smoothness and steepness of the rock, was on this occasion particularly difficult because of the powdery snow which covered everything, and the bitterly cold wind to which here, and, luckily for us, here

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only, we were exposed. The associations of these slabs are not of a nature to reassure the timid climber. Many years ago, in fact on the very first occasion when the Rothhorn was ascended from the Zermatt side, a startling incident took place near this spot. The party consisted of Messrs Dent and Passingham, with Alexander Burgener, Ferdinand Imseng, and Franz Andermatten as guides, and they were descending the mountain when the exciting occurrence described by Mr Dent happened.¹ He has kindly allowed me to reprint his account.

“Down the first portion of the steep rock slope we passed with great caution, some of the blocks of stone being treacherously loose, or only lightly frozen to the face. We had arrived at the most difficult part of the whole climb, and at a rock passage which at that time we considered was the nastiest we had ever encountered. The smooth, almost unbroken face of the slope scarcely afforded any foot-hold, and our security almost entirely depended on the rope we had laid down in our ascent. Had not the rope been in position we should have varied our route, and no doubt found a line of descent over this part much easier than the one we actually made for, even without any help from the fixed cord. Imseng was far below, working his way back to the *arête*, while the rest of the party were holding on, moving but slowly, with their faces

Above the Snow Line, by Clinton Dent.



THE ZINAL ROTHORN FROM THE BREAKFAST
PLACE ON THE WELLENKUPPE.



THE TOP OF A CHAMONIX AIGUILLE.
By Signor Cajrati Crivelli Mesmer.



A STEEP FACE OF ROCK.



"LEADING STRINGS."

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to the mountain. Suddenly I heard a shout from above; those below glanced up at once: a large flat slab of rock, that had afforded us good hold in ascending, but proved now to have been only frozen in to a shallow basin of ice, had been dislodged by the slightest touch from one of the party above, and was sliding down straight at us. It seemed an age, though the stone could not have had to fall more than 10 feet or so, before it reached us. Just above me it turned its course slightly; Franz, who was just below, more in its direct line of descent, attempted to stop the mass, but it ground his hands against the rock and swept by straight at Imseng. A yell from us hardly awoke him to the danger; the slab slid on faster and faster, but just as we expected to see our guide swept away, the rock gave a bound for the first time, and as, with a startled expression, he flung himself against the rock face, it leapt up, and, flying by within a few inches of his head, thundered down below. A moment or two of silence followed, and then a modified cheer from Imseng, as subdued as that of a 'super' welcoming a theatrical king, announced his safety, and he looked up at us with a serious expression on his face. Franz's escape had been a remarkably lucky one, but his hands were badly cut about and bruised. In fact, it was a near thing for all of us, and the mere recollection will still call up that odd sort of thrill a man experiences on suddenly recollect-

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ing at 11 P.M. that he ought to have dined out that evening with some very particular people. Had not the rock turned its course just before it reached Franz, and bounded from the face of the mountain over Imseng's head, one or more of the party must unquestionably have been swept away. The place was rather an exceptional one, and the rock glided a remarkably long distance without a bound, but still the incident may serve to show that falling stones are not a wholly imaginary danger."

A far more serious occurrence, however, took place on the north side of the Rothhorn in 1894, involving the loss of a life, the rest of the party escaping in a miraculous manner.

I take my account of the disaster from *The Alpine Journal*.

"On 20th September an accident occurred on the Zinal Rothhorn, in which Joseph Marie Biner, a well-known Zermatt guide, lost his life. The other members of the party were Dr Peter Horrocks and Peter Perren, both of whom are to be congratulated on their very narrow escape. The party had already effected the ascent of the mountain, and were descending towards Zermatt. On reaching the well-known *Blatte* overlooking the Durand Glacier, the usual precautions were observed. Biner, who was leading, crossed the awkward slab, and planted himself firmly on the opposite side. Perren, who was

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last, was standing behind and holding on to a fair-sized rock, round which he was paying out the rope; while Dr Horrocks crossed the slab, and Biner gradually pulled in the slack. Suddenly, the rock in which Perren placed such confidence came out, and bounded down the mountain side. Perren slid rapidly down the steep rocks; Dr Horrocks, who had no foot-hold and very little hand-hold, was jerked from his position, turning a somersault, and becoming momentarily stunned from his head striking against the rock. The strain on the rope was too great for Biner to withstand, and he was dragged down too. The whole party half tumbled, half slid, down the very steep smooth rocks for 30 feet or 40 feet, when the rope between Dr Horrocks and Perren caught behind a projecting rock, and brought them both to a standstill. Perren found himself landed in a small patch of soft snow some 15 feet below the rock, which had so fortunately engaged the rope, while Dr Horrocks, some 7 feet higher up, though at first suspended with his back to the steep rocks, was very soon able to get more or less foot-hold. Poor Biner had the extra length of his own rope still to fall, and, when the strain came, the rope broke, according to one account, half-way between him and Dr Horrocks; according to another, rather nearer to the latter. Biner fell down on to the Durand Glacier, some 2000 feet below, whence

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his mutilated body was recovered by a search party which crossed the Trift Pass, carried the body down to Zinal, and so by road and train brought it to Zermatt, where the funeral took place. Dr Horrocks and Perren were rescued from their dangerous position some ten or twelve minutes after the accident occurred, by the guides Emile Gentinetta and Edouard Julen, who were following down the mountain with another party."

To return to ourselves. We steadily progressed down the cold and snowy face, with rope kept taut and paid out slowly as, one by one, we moved lower. I need not follow our climb, which was without incident, and while it was still daylight, we reached the snow ridge, on the stones just below, which in ascending it is usual to pause for breakfast. We were particularly anxious to be off the stony rocks below and to gain the little glacier and pass over the moraine before dark, but this we could not manage, so in spite of our lantern we wandered about on those odious rocks for hours before we found the gully by which alone it is possible to get off them. Our various attempts entailed the descent of slippery chimneys leading to the top of black precipices, with nothing to be done but scramble up again, merely to embark in other chimneys with precisely similar consequences. I got so sick of the whole thing that I would gladly have

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dozed under a rock and awaited daylight. The guides, however, stuck to the business, and after a positive nightmare of gullies they at last hit off the right and only one. I have seldom felt greater satisfaction than when I stepped off those detestable rocks on to the snow, shimmering beneath our feet in the starlight. We had now only to cross the glacier and make our way down an exceedingly steep but well-defined foot-path over the sharply-crested moraine. Once we had left this behind us we had nothing more than grass-slopes between us and the Trift Inn. As soon as we reached this final stage in our day's work, we selected the most comfortable-looking hollow, and hanging the lantern to an axe stuck upright in the ground, we prepared, at a somewhat unorthodox hour and within only thirty minutes of the hotel, to enjoy a well-earned meal.

CHAPTER XIII

BENIGHTED ON A SNOW PEAK

IN a most interesting account of a mountain adventure which, by the courtesy of the writer, Sir H. Seymour King, I am enabled to reprint from *The Alpine Journal*, we are once more reminded that a party of thoroughly competent and robust mountaineers can come without evil after-effects out of a night of great hardship which would have undoubtedly proved fatal to ill-equipped and inexperienced amateurs and guides, such as those accompanying Mr Burckhardt, who perished from exposure on the Matterhorn.¹

After describing a previous ascent, Sir H. Seymour King goes on to say:

“A few days later we went to Mürren, with the intention of carrying out a long-cherished plan of mine and testing the possibility of ascending the Silberhorn from the Roththal. Previous ascents had proved so lengthy, necessitating, I think, in nearly every case, the passing of a night on the rocks or

¹ *True Tales of Mountain Adventure*, p. 269.

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the glacier, that I thought it would be highly desirable if some shorter route could be discovered. I had an idea that the route by the western *arête* would prove to be the one sought for. Unfortunately, we were delayed in making an attempt by bad weather until the 23rd of September, which is undoubtedly too late in the year for so difficult an expedition.

"I left the Hôtel Silberhorn with Ambrose Supersax and Louis Zurbrücken as guides, and a porter, at ten o'clock on the morning of the 23rd of September, and followed for some distance the usual path to the Jungfrau Hut; at length, leaving the Roththal path on the right, we struck off into a goat track, which leads by narrow ledges round the shoulder of the great bluffs forming the northern boundary of the Roththal. In this way gaining the face of the alp fronting Mürren, we made our way to the base of the 'Strahlplatten,' where we had determined to encamp for the night.

"The nights were already lengthening out, and where we were it was not light before six, and it was not possible to move earlier than five; punctually at that hour we started. We took only one knapsack with us, leaving the rest of the things with the porter, whom we instructed to stay where he was until he saw whether we were going to return the same way or not, as we thought it was quite possible we might have to pass another night at the same place. We

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therefore arranged with him that when we got to a certain point on the ridge, if we intended to return, we would wave our hats; but if we made no sign, he might pack up his things and go home, as in that case he might understand that we had determined either to descend from the Silberhorn across the glacier to the Wengern Alp, or else make our way over the Jungfrau, and pass the night in the Bergli Hut.

“Now let me try for a moment to describe the appearance of the rock face up which we purposed making our way on to the *arête*. From where we were the *arête* appeared to run nearly due east and west. At the west it terminated in the precipices which face Mürren, and at the east with the peak whence we had arranged to signal to our porter. From this peak a ridge descended towards the valley bounding the side facing us. On that side the rock face itself was divided into two compartments by a well-marked ridge running down the middle, giving the appearance of two couloirs leading to the *arête*; the whole side was composed of extremely smooth rocks, with very little foot-hold or hand-hold which would be extremely dangerous, if not impossible, to attempt, if they were not dry. Fortunately, we found them perfectly free from either water or ice, and, with the exception of one difficult piece, which it took us some little time to

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surmount, we found nothing to check us until we were just under the *arête*. We ascended by the right-hand couloir, if I may so term it, and then made for the gap on the ridge at the extreme westerly end. Just below this gap we experienced some difficulty, owing to the excessive smoothness of the rocks, but finally reached the gap I have mentioned a little before nine.

"I need not say that our hopes rose high, and that we were in the very best of spirits, and when we finally stood in the gap itself we began to think the worst part of the work was over. We soon found, however, that it had hardly begun; it was all very well being in the gap, but the problem was how to get from there on to the *arête* itself; for, though the latter was not more than 20 feet above us, the peculiar formation of the rocks rendered every attempt to get on to it fruitless. The rocks hung over on every side. We exhausted ourselves in vain attempts to surmount them. An hour soon passed away, and after each of us in turn had failed, we sat down disconsolately to consider the situation under the lee of the ridge, so as to be out of the way of the biting north wind which was blowing. Looking round as we sat mournfully consuming some breakfast, I spied a bottle in a crevice, and found it contained the names of Mr C. E. Matthews and

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Herr E. von Fellenberg, with Melchior Anderegg and two other guides; it was undated, but recounted how they had reached this spot and had been obliged to return without achieving their object, which apparently was identical with our own. This was the last straw, and exasperated Ambrose to the highest degree. That we should have gone through so much only to have gained the same spot where another party several years before had arrived was too much for his equanimity. He vowed he would never go back, and nothing under heaven should turn him back, he would get on to the ridge. We might do as we liked, he meant to stay there until he had. All of which I pointed out to him was very fine talk, but, as men were at present constructed, it did not appear to me possible to climb an acute angle. Ambrose, however, persisted that he would make another attempt to get on to the ridge, and, as it was quite hopeless anywhere on the side by which we had ascended, he roped himself, and insisted on being let down the northern face of the mountain.

“With great skill he managed to work himself along the face for the full length of the rope, and the first 100 feet being exhausted, a second of 80 feet was tied to it, and this again paid out to its utmost length; still he could find no way up to the ridge. He thereupon demanded that the

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rope should be let go, and, in spite of our remonstrances at the danger he was running, he pulled it in, slung it on his back, and proceeded, while we sat down and waited with no little anxiety lest some accident should befall him.

"For half an hour we neither saw nor heard anything of him, and our shouts remained unanswered. Zurbrücken muttered at intervals something about 'Dummheit,' and was evidently very uneasy. Suddenly we heard a shout from above, which told us he had succeeded in ascending the wall above him, and getting on to the ridge, down which he was actually coming at the moment, and the next minute he was peering over the point where we had been stuck.

"It was really a magnificent exhibition both of pluck and skill, and Ambrose deserves the highest credit for his success. Letting the rope over, and fastening it well to a piece of rock, he first hauled up the ice axes and knapsacks, and then we each in turn were half hauled, and half climbed to the place where he stood. I know when I arrived at the top I was nearly speechless from the terrible exertion it was necessary to make, and the pressure of the rope on my ribs; I could only lie on my back and gasp feebly for brandy!

"However, it was imperative to proceed; more than two hours had been wasted here, and it was

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nearly eleven o'clock. The way in front of us looked fairly plain and easy, and our hopes once again began to rise; but soon, as we proceeded along the ridge, it became narrower and narrower, until from walking we were reduced to kneeling, and at last could only proceed *à cheval*; in this elegant position we struggled along for some little distance, until the *arête* widening out again permitted us once more to stand up; but here we found the rocks much more difficult, and finally absolutely impossible. At the foot of the peak at the easterly end of the ridge which I have before mentioned we were forced off the *arête* on to a wall of ice which led to the summit; the slope was at a very sharp angle, the ice very hard and blue, and at last became so steep that we were forced back on to the rocks, and with some considerable difficulty reached the summit; from there we could see the Silberhorn in front of us jutting out like a great white promontory into a frozen sea. It being then one o'clock, we saw there was no possibility of our getting back the same way that evening, so we made no sign to our porter, whom we could see watching us far down below.

"The formation of the ridge here is somewhat curious. After a slight descent it broadens out into a small and much crevassed glacier, shut in on the further side by a level snow wall, the promontory

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which I have mentioned above. The *arête* of this wall appears to run level from the rock ridge to its northern termination; indeed, I am of opinion that the highest point is on the rock ridge itself, and that the extreme end of the ridge facing the Wengern Alp is a few feet lower than the rocks overlooking the Roththal.

“We speedily crossed the little intervening glacier, or snow-field, and commenced to ascend diagonally the snow wall, but found the snow in such a dangerous condition, lying as it was loosely on the surface of ice, that from the fear of starting an avalanche we once more made our way back to the ridge which formed the continuation of the *arête* along which we had been climbing. Here the rocks were extremely difficult, being interspersed with ice and very rotten. I think this was one of the most difficult parts of the expedition. It was half-past three when we reached the final summit, and then made our way along the snow ridge nearly to its extremity. The snow *arête* was very narrow, and in its then condition not very pleasant to traverse; the day too was far advanced, and we had no time to spend in much exploration, so we returned as quickly as we could to the ridge which leads down to the Silberlücke; we were already getting very doubtful as to whether we should get any shelter for the night. We had reached the narrow rock *arête* joining the

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Silberhorn with the precipices of the Jungfrau; in the middle was the narrow gap called the Silberlücke, and to that we crawled down and halted a moment to consider whether it would not be better to descend on to the glacier and strike across to the Wengern Alp; but we knew from the results of previous expeditions that crossing the glacier would probably take four, if not five hours. None of us had ever been across it; it was then four o'clock, and it would be dark at six. Our only hope lay in getting across the Jungfrau before the daylight finally died out. In the gap we found a ladder left by some previous explorer, and two or three pieces of wood; and after debating whether we had not better pass the night there, finally decided to push on for the Jungfrau.

"Our chance of escaping a night in the open air depended mainly on two points: first, whether the snow leading to the Jungfrau was in fairly good condition; and, secondly, whether anybody whose steps we could make use of for descending had been on the mountain that day. A few minutes settled the first question; we found that the slopes leading up to the upper snow-field which circles round the base of the Jungfrau were hard as ice, and we were soon laboriously cutting steps upwards. We pushed on with all speed, but step-cutting is at the best a slow operation, and before we got into the Roththal track the lengthening shadows had almost overtaken us.

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We hurried on and managed to get across the *bergschrand* before the last rays of sunlight left the summit of the Jungfrau. As we surmounted the final rocks I turned for a minute to look across Switzerland, and was rewarded by one of the most beautiful spectacles it has ever been my good fortune to witness. The valleys were filled with mist, but the setting sun tinged their surface with a deep crimson glow ; the last rays were still lingering round Mont Blanc and one or two of the higher mountains ; where we stood was still filled with golden light from the last rays of the sinking sun. The sky was perfectly clear, and the panorama which unrolled itself before our eyes with its mingled light and shadow was one of the most wonderful that lover of mountain scenery could desire to gaze on. A justification for the erection of a hut on the summit of the Jungfrau might almost be found in the possibility of obtaining such a view.

“But we had no time for indulging in rhapsodies ; a bitter north wind was still blowing so keenly, that the upper leather of our boots had frozen stiff as boards while we walked. The moon was well up, and if only our second hope were realised, and some one had been on the mountain that day, we might find a refuge from the wind in the Bergli or Concordia Huts. We tumbled rather than scrambled down the rocks by the flickering moonlight, until

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we reached the well-known point where it is necessary to strike across the face just above the Roththal Sattel. Our last hope was dashed to the ground. No one had been there that day, and if we were to get down it must be by our own efforts. So Ambrose at once set to work to cut steps across the face. We had been there a fortnight before, and gone up and down the Jungfrau without cutting hardly a step; now the face was all blue ice, and in five minutes I made up my mind that the risk of such a descent was too much to take.

“The wall above the great *bergschrand* was in shadow, the *bergschrand* last year was especially formidable, and we were all too exhausted safely to face the freezing wind on such a steep ice-slope in the dark. We returned, therefore, to the rocks, and, after a brief consultation, decided to pass the night there as best we could. We managed to find a corner shut in on two sides by rock about 5 feet high, from the floor of which we set to work to rake out the snow with our axes. The snow had drifted to a considerable depth, and its excavation gave us a good quantity of heat to start the night with, but our boots refused to thaw, and do what we would our feet would not get warm.

“Our provisions being nearly exhausted, we agreed only to take a mouthful of brandy and a little bread that night, and keep the bulk of the provisions until

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next morning, when we expected to be in a more or less exhausted condition, as the cold was very great, and it was obvious that we had a pretty severe ordeal before us. It was by this time half-past seven o'clock. We put on our gloves and gaiters, buttoned up our coats, and after making a seat apiece out of three smooth stones, sat down as close together as we could, and commenced to smoke.

"The night was beautifully clear, but far away to the south we could see a great thunderstorm raging over the Italian hills, and were in no little trepidation lest it should be coming up in our direction, as indeed a storm had done in exactly a similar way a week before; but the north wind kept it at bay, and we luckily had not a snow-storm to face in addition to the other discomforts.

"The night passed slowly enough; it was necessary to keep shuffling our feet and beating our arms together the whole night long without cessation, in order to prevent being frost-bitten, and it was even more difficult to keep awake. The hours, however, passed somehow, and at half-past four the first primrose streaks in the sky heralded the coming day. By five o'clock the welcome face of the sun peeped over the Trugberg, and we began to prepare for a start.

"Our first thought was breakfast, but this solace was denied us; the wine and brandy had frozen

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during the night, and were solid lumps of ice; the bread required nothing less than an ice-axe to cut it, and then probably would have flown into chips like a log of wood; the three remaining eggs we possessed had been converted during the night into icicles; there was nothing for it, therefore, but to start hungry and thirsty. Ambrose proposed that he and Zurbrücken should first cut the steps, and then come back for me, but after a very few minutes' exposure to the wind they were obliged to return and wait until the sun had warmed them a little, the biting cold of the night and exhaustion from want of sleep rendered it impossible to face the work of step-cutting in such a bitter wind. We resumed our seats, therefore, and waited another hour, and then commenced our descent to the *bergschrund*. We had to cut steps the whole way down, and very glad I was we had not attempted it in the dark, as I think it would have been almost impossible to get over without an accident.

"We pushed on steadily, but the night had taken all the spurt out of us, and our progress across the Jungfrau Firn was not very rapid. We hoped to find water under the Mönch Joch, where we had found a good supply a fortnight previously, but the wind had prevented the snow melting at the time we reached the spot, and there was nothing for it but to press on to Grindelwald, and it was not until

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we reached the end of the Viescher Glacier that we found any water to drink. At the Bäregg we got some ginger nuts to eat, and by three o'clock in the afternoon were being hospitably welcomed by the Bosses at the 'Bär,' whose welcome was never more appreciated. These estimable hosts soon had an excellent dinner ready, and by half-past four I was driving to Interlaken to rejoin the rest of my party."

CHAPTER XIV

THE STORY OF A BIG JUMP

THROUGH the kindness of Dr Kennedy, I am enabled to reprint from his new edition of *The Alps in 1864*, by the late Mr A. W. Moore, an admirable account of the first passage of the Col de la Pilatte in Dauphiné. This expedition has become classical, thanks to Mr Whymper's fine description of it,¹ so it is interesting to read what impression the adventures of the day made on another member of the party. The first part of the expedition was easy, but, wrote Mr Moore, "before getting near the foot of the couloir, we had something to do in threading a way up and through the huge chasms into which the glacier was broken. Croz was here thoroughly in his element, and led the way with great skill and determination, passing one obstacle after another, and bearing gradually to the left towards the enemy. At every step we took, it became more apparent that nature had never intended any one to pass this way, and had accord-

¹ *True Tales of Mountain Adventure*, p. 134.

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ingly taken more than usual pains to render the approach to the couloir difficult and dangerous. Below the highest *bergschrund* were a series of smaller ones, arranged systematically one above the other, stretching completely across a very steep slope, so that they could not be turned, but must each in succession be attacked *en face*. Fortunately at this early period of the season, and with so much snow, the difficulty was less considerable than it would have been under other circumstances, and, exercising every precaution, we finally passed the last of the outer lines of defence, and had nothing but a short steep slope between us and the final *schrund*, above which the couloir rose more unfriendly than ever, as we approached it nearer. I had been sorely puzzled in my mind how we were going to get across this chasm, as from below it appeared to have a uniform width of about 10 feet, the upper edge, as usual, much higher than the lower, and no visible bridge at any point. On getting up to it, however, we found that on the extreme right it had been choked by a considerable mass of snow, the small remains of which at one point formed a narrow, rotten, and most insecure bridge, over which Croz cautiously passed, and made himself firm in the soft snow above. Walker, Whymper, Mons. Renaud, myself, and Almer, then followed, as if we were treading on eggs, and all got safely over, much

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to our relief, as there really appeared no small chance of the bridge going to grief before we were all across, which would have been awkward for those on the wrong side.

"It was just 9.30 when we fairly took to this extraordinary gully, which, above the *bergschrand* was certainly not more than 12 feet wide, and gradually narrowed in its upward course. For the first few steps we trod in a sufficiency of soft snow in good condition, but, to our dismay, this soon sensibly diminished both in quantity and quality, until at last there was nothing but the old, disgusting, powdery snow resting on hard ice. The axe accordingly came into play ; but if steps were cut of the ordinary size, we should never get to the top till night, so Croz just hacked out sufficient space for the feet to cling to, and worked away as fast as possible, cautioning us emphatically to look out, and to hold on well with our axes while each step was being cut. Another argument in favour of rapid progress arose from the palpable danger in which we were. The centre of the couloir was occupied by a deeply-scored trough, evidently a channel for stones and avalanches, while the space on either side was so narrow that in case of a large fall we could scarcely expect to escape unharmed. Looking up to see what was likely to come down, we discovered at the very head of the couloir a perpendicular or slightly over-

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hanging wall of *névé*, some 30 feet in height, and lower down, projecting over the rocks on our left, an enormous mass of icicles, on which the sun was playing, and, of course, momentarily loosening their tenure to the rocks. At the moment we were exactly in the line which they must follow, if they fell, as they evidently would before long, so we lost no time in crossing the stone channel to the other side, where the great mass was scarcely likely to come, and we might probably ward off any stray fragments. I received a lively hint as to the effect of a *large* mass of ice coming suddenly down on one's head, by the effect of a blow from a comparatively small piece, which Croz hewed out from one of the steps. Being so far down in the line, it had time to gain momentum before it struck me, which it did on the head with such violence that for a few moments I felt quite sick and stupid. The incident will give a very good idea of the steepness of the slope on which we were. I had too much to think of to measure it with a clinometer, but it was certainly steeper than any part of the couloir leading to the Col des Ecrins, the greatest inclination of which was 54° . At one point a little water trickled over the rocks, which the two front men managed to get a suck at, but those behind were out of reach, and the footing was too precarious for more than a minute's halt, not to mention occasional volleys of

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small stones which shot by us, and might be the precursors of large ones. I don't think that I ever experienced a greater feeling of insecurity than during the whole of this ascent, which was unavoidably long. What with the extreme steepness of the slope, and the necessary vagueness of the steps, which were made additionally unsafe by the powdery snow which filled them up as soon as they were cut, I felt that a slip was a by no means unlikely contingency, and was glad enough upon occasions to find Almer's hand behind, giving me a friendly push whenever a particularly long stride had to be made. When we were nearing the top, our attention was attracted by a tremendous uproar behind us, and, looking round, we were just in time to see a prodigious avalanche falling over the cliffs of the Pic de Bonvoisin, on the other side of the valley. It was at least a quarter of a mile in length, and many minutes elapsed before the last echoes of its fall died away. We were now so near the great snow-wall that it was time to begin to circumvent it; so, crossing the couloir again, we clambered up the rocks on that side in order to get out of it, hoping to be able from them to get on to the main ridge to the left of the wall, which itself was quite impassable. As Almer had expected, the snow was here very thin over the rocks, and what little there was, was converted into ice, so that the climb-

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ing was most difficult and perilous, and we had no small trouble to get on at all. However, we managed to scramble up, and found ourselves overlooking a gully running parallel, and of a similar character, to the one we had been ascending, but free from snow and ice, and much more precipitous. On our side it was quite impossible to get on to the main ridge as an impracticable rock rose above our heads, and it was, therefore, necessary to step across this second couloir. I never made a nastier step; the stride was exceedingly long, there was nothing in particular to stand on, and nothing at all but a smooth face of rock to hold on by, so that we had literally to trust to the natural adhesiveness of our hands. Fortunately, there was sufficient rope to allow the man in front to cross and get on to the main ridge, and make himself fast before his successor followed, so we attacked the difficulty in turn. I got over somehow, but did not like it at all; lifted myself on to the ridge, Almer followed, and at 10.45 A.M., the Col was gained.

"During our ascent of the couloir, the weather, though doubtful, had not been unfavourable, but, just as we got on to the ridge, a cloud swooped down, and enveloped us in its dense folds, and at the same moment it began to snow violently. Luckily Croz, who was first on the top, had been able to satisfy himself that we *were* above the

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Glacier de la Pilatte, and got a glimpse of what lay between us and it; but the state of the atmosphere was, nevertheless, sufficiently disappointing, as we were unable to fix with accuracy the exact position of our gap with reference to the peak of Les Bans, and the highest point of the Boeufs Rouges, or to determine its height. From the Brèche de la Meije, we had seen clearly that we were then considerably lower than any point on the ridge south of the Glacier de la Pilatte, and, taking this into consideration, together with the apparent height of our gap, seen from the valley below, we estimated the height of the Col, which we proposed to call Col de la Pilatte, at about 11,500 feet. It is certainly not much below this, and is, therefore, probably the highest pass yet effected in the Dauphiné Alps.

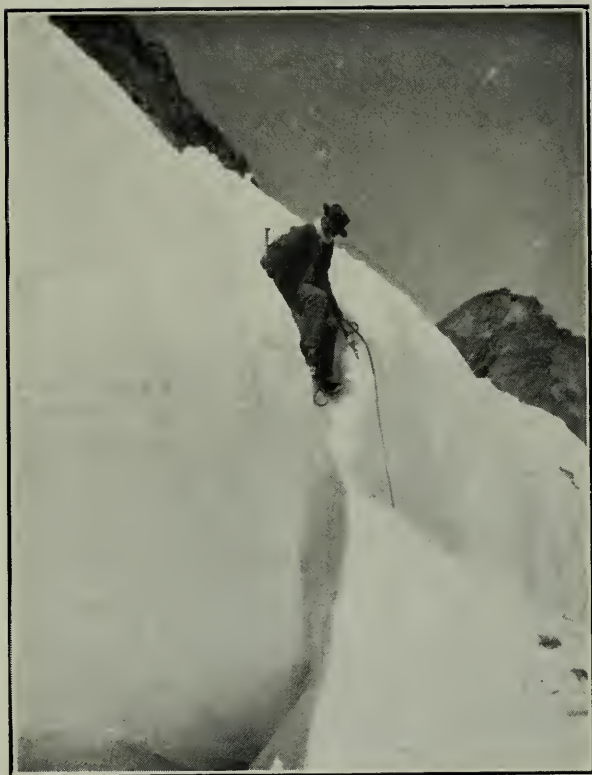
“It was no less provoking to have missed the view of the Ecrins and Ailefroide, which we had expected to be particularly fine. But there was no help for it, and no prospect of immediate improvement; so, without halting for a minute, we commenced the descent in the same order as before. All we could see was a steep ice-wall, stretching downwards from our feet, the actual ridge not being more than a couple of feet wide. What was the length of the wall, or what lay below it, we could not discover, but had a shrewd suspicion that we should anyhow find

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a considerable *bergschrand*. Croz steered to the left, and began cutting steps diagonally downwards. The snow was in a much worse condition than it had been in the couloir; there was more of it, but it was so exceedingly soft, that our feet pressed through it to the hard ice, as though it had been water, and we were very rarely able to trust to it without cutting a step. We should have been better pleased had there been no snow at all, as the whole slope, the angle of which was about 50° , was in just the proper condition for an avalanche. I never saw Almer so nervous, and with reason; for, as he himself said, while he implored us not to move from one step into another before we felt that one foot at least was secured, this was just one of those places where no amount of skill on the part of Croz or himself could entirely prevent the chance of a serious accident. It was a wonder how we did manage to stick to some of the steps, the objectionable character of which was increased from their being cut along the side of the slope, a position in which it is always more difficult to get from one to the other than when they are cut straight up or down. As we got lower down there was more snow, which, though softer than ever, was so steep that we could tread tolerably secure steps on it, by help of which we worked down, until we found ourselves brought up short on the upper edge of the expected *bergschrand*. Croz had hoped to hit this at a point

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where it was partially choked, but he was disappointed, as the chasm yawned below us, entirely unbridged. A glance right and left showed that there was no more assailable point within reach, so Croz gave out the unwelcome intelligence that if we wished to get over we must jump and take our chance. The obstacle appeared to be about 10 feet wide, of uncomfortable depth, and the drop from the upper to the lower edge about 15 feet. From the lower edge the glacier sloped away, only less steep than the wall on which we were, of which it was a continuation, but cut off by this sudden break. There was, however, so much soft snow that we should fall easy, and the only difficulty, therefore, was to take a sufficiently fair spring to clear the chasm ; for, good as I believed my rope to be, I should have been sorry to see any one suspended by it, with a sudden jerk, over such a gulf as that we had beneath us. Walker was untied, so as to give rope enough to Croz, who then boldly sprung over, and landed heavily on the lower edge in the snow, where he stood to receive the rest of the party. Walker followed, and then Whympers, leaving Mons. Renaud, myself, and Almer above. Mons. Renaud advanced to the edge, looked, hesitated, drew back, and finally declared that he could not jump it ; he felt perfectly convinced that he should be unable to clear the distance, and should jump in instead of over. We



A VERY TAME BERGSCHRUND.
By Mr. Leonard Rawlence.



HOMEWARD OVER THE SNOW-SLOPES.

To face p. 230.

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encouraged him, but without effect, and at last proposed to lower him down, when the others would hook hold of his legs somehow and pull him across. Almer and I, therefore, made our footing as secure as possible, anchored ourselves with our axes, and made all ready to lower our friend, but his courage failed him at the last moment, and he refused to go. We were now obliged to use stronger arguments, as it was snowing fast, and time was passing, so we pointed out that, if we wished to return ever so much, we could not get the others back across the *schrund*, and that, in point of fact, there was no chance—over he *must* go. Again did he advance to the edge, again draw back, but finally, with a despairing groan, leaped, and just landed clear of the chasm, but, instead of letting his rope hang loose, he held it in one hand, and thereby nearly pulled me over head foremost. Then came my turn, and I must confess that, when I stood in the last step from which I had to spring, I did not like the look of the place at all, and, in fact, felt undeniably nervous. But I had not been one of the least backward in objurgating Mons. Renaud, so felt constrained to manifest no hesitation myself, whatever might be my private feelings. I, therefore, threw over my axe and spectacles, gathered myself up, and took the leap. The sensation was most peculiar. I had not the faintest idea whether I should or should not clear the chasm, but the doubt was soon solved

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by my landing heavily on the further side, rather to the right of the rest of the party. The heavy load on my back sent me forwards on my face, and I shot down the slope with tremendous velocity, head foremost, until I was suddenly stopped by the tightening round my waist of the rope, the other end of which was held by Almer above. My first impression was, that half my ribs were crushed in ; as it was, my wind was so completely bagged by the severity of the jerk that I could not speak, but laughed hysterically, until nature's bellows had replenished my unlucky carcass. The incident was so far satisfactory that it showed the enormous strength of the rope, and also how severe a shock a man like Almer, standing in a most insecure position, can bear unmoved when he is prepared for it. My weight, unloaded, is $10\frac{1}{2}$ stone, and the strain on the rope was certainly nearly as great as though I *had* jumped into the crevasse. Almer now followed us over, and at 11.35 we were all together without accident below the *schrund*, which, with the wall above it, was as ugly-looking a place as I would wish to see.

“ We now floundered down the slope of soft snow, without taking much care, as we imagined that henceforward it was all plain sailing, but were abruptly checked in our pace by coming upon a huge crevasse, of great length and breadth, but covered over in

THE STORY OF A BIG JUMP

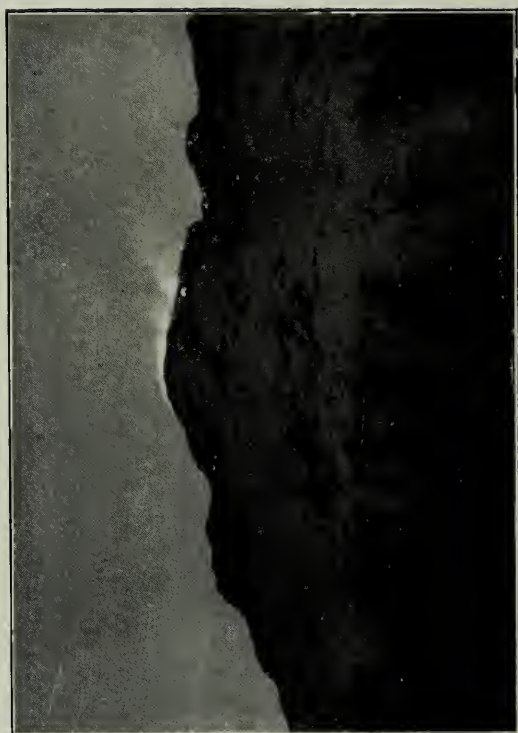
places. Several attempts were made to cross at one of these points, but without success, as the breadth was too great, and the snow unsubstantial in the extreme, and a long *détour* was necessary before we were able to get over near its eastern extremity. This proved to be the beginning of a new series of troubles, as the chasms became more and more numerous and complicated, until the slope which we had imagined would be so easy, resolved itself into a wall of gigantic *séracs*, the passage of which tasked our energies to the utmost. The difficulty of the position was increased by our still being enveloped in a mist so thick that we could not see a distance of 20 feet below us, and were in a happy state of ignorance as to whether we were steering properly, or were only plunging deeper into the mire. Nothing, however, could exceed the energy and skill with which Croz threaded his way through the labyrinth which surrounded us. He never once had to retrace his steps, but, cutting along the sides of some crevasses and underneath others, he steadily gained ground. In spite of the generally deep snow, a good deal of step-cutting was necessary here and there, and we had nearly an hour of most exciting work before the inclination of the glacier diminished, and at 12.30 P.M., for the first time since leaving the Col, we stood at ease upon a flat plain of snow. But how long would it last? A fog on an unknown glacier

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always suggests to my desponding mind the probability of marching round and round in a circle, and finally having to pass the night in a crevasse, so that I, personally, was particularly relieved when, just as we emerged from the *séracs*, the mist suddenly lifted sufficiently to let us see a long way over the glacier in front, which displayed itself to our admiring eyes perfectly level and uncrevassed."



CLOUDS BREAKING LIKE A GIANT WATERFALL ON A MOUNTAIN RIDGE.



SNOW (NOT CLOUD) BLOWN BY A TERRIFIC WIND FROM A MOUNTAIN RIDGE.



THE ECRINS FROM THE SUMMIT OF THE GRANDE RUINE.



THE SUMMIT OF THE JUNGFRAU. (P. 217.)

To face p. 235.

CHAPTER XV

A PERILOUS FIRST ASCENT

MR WHYMPER has also immortalised the first ascent of the Ecrins. Here is the account Mr Moore wrote in his diary of that eventful day:

“It must be confessed that the higher we climbed, the greater became our contempt for our peak. It certainly seemed that, once over the *bergschrund*, we ought very soon to be on the top, and so persuaded was I of this, that I hazarded the opinion that by 9.30 we should be seated on the highest point. Whympers alone was less sanguine; and, probably encouraged by the result of his former bet, on hearing my opinion, offered to bet Walker and myself two francs that we should not get up at all, an offer which we promptly accepted. We were now sufficiently near to the *bergschrund* to be able to form some idea of its nature and difficulty. It certainly was a formidable-looking obstacle running completely along the base of the final peak, or rather ridge from which the peak itself

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rose. For a long distance the chasm was of great width, and, with its upper edge rising in a wall of ice, fringed with icicles, to a height of, perhaps, 30 feet above the lower edge, was obviously quite impassable. But on the extreme right (looking up), the two lips so nearly met that we thought we might be able to get over, and on the extreme left, it seemed possible, by a considerable *détour*, to circumvent the enemy, and get round his flank. We finally determined on the latter course, as, to the right, the slope above the chasm seemed to be steeper than at any other point. After the first start, we had been steering tolerably straight forwards up the centre of the glacier, and were now approaching the *bergschrand*, just under the highest peak of the mountain, at about its most impracticable point. The more direct course would have been to attack it on the right, but, for the reason above stated, we chose the opposite end, so had to strike well away to the left diagonally up the slope. We here first began to suspect that our progress would not be quite so easy and rapid as we had hoped, as the snow became less abundant, and the use of the axe necessary. Still we worked away steadily, until, at 8.10 A.M., in one hour and forty minutes from the Col, we turned the *bergschrand*, and were fairly on its upper edge, clinging to an ice-step which promised

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to be only the first of an unpleasantly long series.

“Above us the slope stretched up to some rocks, which continued without interruption to the main ridge, a prominent point on which was just above our heads. The rocks looked quite easy, and it seemed that, by making for them just under the small peak, we should be able to work round the latter, and get on to the main ridge to the right of it without serious difficulty. Almer led, and wielded his axe with his usual vigour, but the ice was fearfully hard, and he found the work very severe, as the steps had to be cut sufficiently large and good to serve for our retreat, if need be. After each blow, he showered down storms of fragments which came upon the hands and legs of his followers with a violence that rendered their position the reverse of pleasant. Still the rocks kept their distance, and it was a long time before we scrambled on to the lowest of them, only to find that, although from below they had appeared quite easy, they were in reality very steep, and so smooth that it was scarcely possible to get along them at all, the hold for hands and feet being almost nil. The rocky peak, too, above us turned out to be much further off than we had supposed, and, to reach the point on the main ridge to the right of it, we had before us a long

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and difficult climb up and along the face of the rocks. The prospect was not pleasant, but we scrambled along the lower part of the rocks for a short time, and then Almer started off alone to reconnoitre, leaving us rather disconsolate, and Walker and myself beginning to think that there was a considerable probability of our francs, after all, finding their way into Whymper's pocket. Croz did not approve of the rocks at all, and strongly urged the propriety of getting down on to the ice-slope again, and cutting along it above the *bergschrund* until we should be immediately under the peak, and then strike straight up towards it. He accordingly cast loose the rope, and crawling cautiously down, began cutting. I am not very nervous, but, as I saw him creeping alone over the ice-covered rocks, I felt an unpleasant qualm, which I was doomed to experience several times before the end of the day. Just as Croz had begun to work Almer returned, and reported that things ahead were decidedly bad, but that he thought we could get on to the *arête* by keeping up the rocks. We passed his opinion down to Croz, and, while he was digesting it, we communicated to Almer what Croz had been saying to us. Now, up to the present time no two men could have got on better, nor more thoroughly agreed with each other, than Croz and Almer. We had been slightly afraid that the

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natural antipathy between an Oberlander and a Chamouniard would break out upon every occasion, and that a constant series of squabbles would be our daily entertainment. We were, however, agreeably disappointed, as Almer displayed such an utter abnegation of self, and such deference to Croz's opinion, that had the latter been the worst-tempered fellow in the world, instead of the really good fellow that he was, he could not have found a cause of quarrel. Upon this occasion, although Almer adhered to his own opinion that it would be better to keep to the rocks, he begged us to follow the advice of Croz, who was equally strong in favour of the ice, should he, on further consideration, prefer that course. Croz protested emphatically against the rocks, but left it to us to decide, but in such a manner that it was plain that a decision adverse to his wishes would produce a rumpus. The position was an awkward one. The idea of cutting along a formidably-steep slope of hard ice immediately above a prodigious *bergschrund* was most revolting to us, not only on account of the inevitable danger of the proceeding, but also because of the frightful labour which such a course must entail on the two men. On the other hand, a serious difference with Croz would probably destroy all chance of success in our attempt. So convinced, however, were we that the rocks offered the most advisable route that we determined to try the

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experiment on Croz's temper, and announced our decision accordingly. The effect was electric ; Croz came back again in the steps which he had cut, anger depicted on his countenance, giving free vent to the ejaculations of his native land, and requesting us to understand that, as we had so chosen, we might do the work ourselves, that he would do no more. Affairs were evidently serious, so each of us cried *peccavi*, and, to calm his irritation, agreed, it must be confessed against our better judgment, to adopt his route. Almer was more amused than annoyed, and concurred without a word, so the storm blew over ; the sky was again clear, and we resumed our labours, which, during the discussion, had been suspended for a few minutes.

"The half-dozen steps that led us to the ice were about the most unpleasant I ever took. The rocks were glazed with ice ; there was nothing in particular to hold on by, and without the trusty rope I should have looked a long time before trusting myself to move. As it was, I was very considerably relieved when we were all standing in the steps, and Croz, again roped on to us, began at 9.35 to cut in front. I must do him the justice to say that, so soon as we were committed to his line of march, he worked splendidly, bringing the whole force of his arm to bear in the blows with which he hewed the steps. Never halting for a moment nor hesitating, he

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hacked away, occasionally taking a glance behind to see that all was right. We could not but admire the determination with which he laboured, but the exertion was fearful, and we became momentarily more of opinion that our original decision was the wisest. The slope on which we were was inclined at an angle of 50° , never less, sometimes more, for the most part of hard blue ice, bare of snow. This was bad enough; but far worse were places which we occasionally came to, where there was a layer of soft, dry, powdery snow, without cohesion, so that it gave no footing, and steps had to be cut through it into the ice below, steps which were filled up almost as soon as cut, and which each man had to clear out with his hands before trusting his feet in them. All the time the great *bergschrand* yawned about 100 feet below us, and the knowledge of this fact kept us well on the alert, although, from the steepness of the slope below, the chasm itself was not visible. One hears people talk occasionally of places where the rope should not be used, because one person slipping might entail the loss of the whole party; but I never heard a guide give vent to any such idea, and certain I am that had any one of us now proposed to take off the rope and go alone on that account, Almer and Croz would never have allowed it, and, indeed, would not have advanced another step. It must be admitted, however, that

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all along this slope, had one of us unfortunately slipped, the chance of the others being able to hold him up would have been very small, and the probability of the party in their fall being shot over, instead of into, the *bergschrund*, still smaller. But, in my opinion, the use of the rope on such places gives so much more confidence, if it is no real protection, that the chances of a slip are much diminished, and certainly a party can progress more rapidly. For an hour Croz kept on his way unwearied, cutting the steps for the most part beautifully, but occasionally giving us rather a long stride, where every one held on like grim death, while each man in succession passed. But at last even his powerful frame required rest; so Almer relieved him, and went to the front.

“All this time we had risen but little, but we were now very nearly under the highest peak, and it was necessary to think of getting on to the ridge; so we at last fairly turned our faces to the slope, and began cutting straight up what appeared to be a great central couloir. Unlike most couloirs, this one did not run without interruption to the ridge above, but came to an abrupt termination at a considerable distance below it, leaving an intervening space of rock, which promised some trouble. But we were yet far from the lowest point of these rocks, and every step towards them cost no small amount of time and labour. I have rarely been on harder ice,

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and, as blow after blow fell with so little apparent result in raising us towards our goal, an inexpressible weariness of spirit and a feeling of despair took possession of me. Nevertheless we *did* mount, and at 11.30, after two hours of terribly hard work (for the guides), we grasped with our hands the lowest of the crags. To get on them, however, was no easy task, as they were exceedingly smooth, and coated with ice. Almer scrambled up, how I know not, and, taking as much rope as possible, crawled on until he was *fest*, when, by a combined operation of pulling from above and pushing from below, each of us in turn was raised a few steps. We hoped that this might be an exceptional bit, and that higher up matters would improve. But it was a vain hope; the first few steps were but a foretaste of what was to follow, and every foot of height was gained with the greatest difficulty and exertion. As we climbed with the tips of our fingers in some small crevice, and the tips of our toes just resting on some painfully minute ledge, probably covered with ice or snow, one question gradually forced itself upon us, almost to the exclusion of the previously absorbing one, whether we should get to the top of the mountain, and this was, how on earth we should ever get down again—get down, that is to say, in any other state than that of *débris*. The idea that it would be possible to descend these rocks again, except with a rush in the shape of an

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avalanche, seemed rather absurd ; and at last, some one propounded the question to Almer and Croz, but those worthies shirked the answer, and gave us one of those oracular replies which a good guide always has at the tip of his tongue when he is asked a question to which he does not wish to give a straightforward response, to the effect that we should probably get down somehow. They were, perhaps, of opinion that one thing at a time was sufficient, and that they had work enough to settle the question of how we were to get up. Our progress was unavoidably slow, and the positions in which one was detained, while the man in front was going the full length of his tether, were far from agreeable ; while hanging on by my eyelids, the view, seen between my legs, of the smooth wall of rock and ice on which we had been so long engaged, struck me as being singularly impressive, and gave me some occupation in discussing mentally where I should stop, if in an oblivious moment I chanced to let go. But to all things must come an end, and, at 12.30 P.M., with a great sigh of relief, we lifted ourselves by a final effort on to the main ridge, which had so long mocked at our efforts to reach it, and, to our huge delight, saw the summit of the mountain on our right, led up to by a very steep *arête* of rocks, but evidently within our reach.

“The work of the last four hours and a half had

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been so exciting that we had forgotten to eat, and, indeed, had not felt the want of food ; but now the voice of nature made itself heard, and we disposed ourselves in various positions on the ridge, which in many places we might have straddled, and turned our attention to the provisions. As we sat facing the final peak of the Ecrins, we had on our left the precipice which falls to the head of the Glacier Noir. Without any exaggeration, I never saw so sheer a wall ; it was so smooth and regular that it might have been cut with a knife, as a cheese is cut in two. Looking over, we saw at once that, as we had thought probable, had we been able to get from La Bérarde on to the ridge at the head of the Glacier du Vallon, it would have been impossible to get down on to the Glacier Noir, as the cliffs are almost as precipitous as those down which we were looking. On the right bank of the Glacier Noir towered the dark crags of the Pelvoux, Crête du Pelvoux, and Ailefroide, a most glorious sight, presenting a combination of, perhaps, the finest rock-forms in the Alps ; I certainly never saw so long and steep a line of cliffs, rising so abruptly from a glacier.

“At 12.50 we started again, Almer leading. We had first to cross a very short but very narrow neck of snow, and Almer had scarcely set foot on this, when a great mass of snow, which had appeared quite firm and part of the ridge, suddenly gave way,

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and fell with a roar to the Glacier Noir below. Almer's left foot was actually on this snow when it gave way. He staggered, and we all thought he was over, but he recovered himself and managed to keep steady on the firm ridge. It is true he was roped; but the idea of a man being dropped with a sudden jerk, and then allowed to hang suspended, over that fearful abyss, was almost too much for my equanimity, and for the second time a shudder ran through my veins. This little isthmus crossed, we tackled the rocks which rose very steeply above our heads, and climbed steadily up along the *arête*, generally rather below the edge on the side of the Glacier de l'Encula. The work was hard enough, but easier than what we had gone through below, as the rocks were free from ice, and the hold for hands and feet was much better, so that there was no fear of slipping. I don't think a word was said from the time we quitted our halting-place until we were close to the top, when the guides tried to persuade us to go in front, so as to be the first to set foot on the summit. But this we declined; they had done the work, let them be the first to reap the reward. It was finally settled that we should all go on together as much as possible, as neither party would give way in this amicable contest. A sharp scramble in breathless excitement ensued, until, at 1.25 P.M., the last step was taken,



THE ECRINS (IN THE CENTRE) FROM THE GLACIER BLANC.
By Signor Vittorio Sella.

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and we stood on the top of the Ecrins, the worthy monarch of the Dauphiné Alps.

“In that supreme moment all our toils and dangers were forgotten in the blissful consciousness of success, and the thrill of exultation that ran through me, as I stood, in my turn, on the very highest point of the higher pinnacle—a little peak of rock with a cap of snow—was cheaply purchased by what we had gone through. Close to us was a precisely similar point, of much the same height, which scarcely came up to the rank of a second summit. It could have been reached in a few seconds from our position, but, as our point was actually the higher of the two, and was also more convenient for sitting down, we remained where we were. I must confess to a total inability to describe the wonderful panorama that lay extended before us. I am not one of those happily constituted individuals who, after many hours of excitement, can calmly sit on the apex of a mountain, and discuss simultaneously cold chicken and points of topography. I am not ashamed to confess that I was far too excited to study, as I ought to have done, the details of a view which, for extent and variety, is altogether without a parallel in my Alpine experience. Suffice it to say that over the whole sky there was not one single cloud, and that we were sitting on the most elevated summit south of Mont

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Blanc, and it may fairly be left to the imagination to conceive what we saw, as, at an elevation of 13,462 feet, we basked in the sun, without the cold wind usually attendant at these heights. There was not a breath of air, and the flame of a candle would have burnt steadily without a flicker. In our immediate neighbourhood, after the range of the Pelvoux, before described, the most striking object was the great wall of the Meije, the western summit of which, from here, came out distinctly the highest. The Aiguilles d'Arves stood out exceedingly well, and, although 2000 feet lower than our position, looked amazingly high. Almost the only trace of civilisation we could distinctly make out was the Lautaret road, a portion of which, probably near the entrance of the valley leading to the Glacier d'Arsines, was plainly visible. On the side of the mountain towards La Bérarde, what principally struck us was a very great and extensive glacier, apparently not marked on the map, which appeared to be an arm of the Glacier du Vallon, but far more considerable itself than the whole glacier is depicted on the French map. Of the extent of the view, and the wonderfully favourable condition of the atmosphere, a fair idea may be gained from the fact that we clearly identified the forms and ridges of the Matterhorn and Weisshorn, the latter at a distance of 120 miles, as the crow flies, and that

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those were by no means the most distant objects visible.

“So soon as the first excitement consequent on success had subsided, we began seriously to meditate upon what during the ascent had frequently troubled us, viz. the descent. With one consent we agreed that unless no other route could be found, it would be most inadvisable to attempt to go down the way we had mounted. The idea of the rocks, to be followed by the ice-slope below—in a doubly dangerous state after being exposed all day to the scorching sun—was not to be entertained without a shudder. The only alternative route lay along the opposite *arête* to that which had led us to the top, and, although we could not see far in this direction, we determined, after very little discussion, to try it. Accordingly, after twenty minutes’ halt, we each pocketed a small fragment of the stone that was lying on the snow, and, regretting that we had no bottle to leave, and no materials with which to construct a cairn, took our departure at 1.45 from the lofty perch which, I fancy, is not likely to receive many subsequent visitors. Passing immediately below the second point before mentioned, so that our hands almost rested on it, and also several similar pinnacles, our work commenced. I never, before or since, was on so narrow an *arête* of rock, and really from step to step I was at a loss

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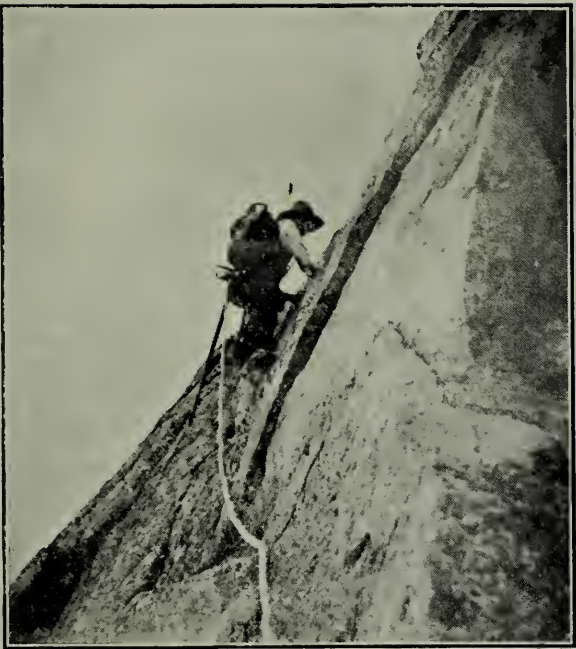
to imagine how we were to get on any further. We kept, as a rule, just below the edge, as before, on the side of the Glacier de l'Encula, along a series of ledges of the narrowest and most insecure character; but we were always sufficiently near the top to be able to look over the ridge, down the appalling precipices which overhang, first the Glacier Noir, and later, the Glacier du Vallon. Of course, every single step had to be taken with the greatest care, only one person moving in turn, and the rest holding on for dear life, Croz coming last to hold all up. In spite of the great difficulty of the route, the obstacles were only such as required more or less time to surmount, and although the slightest nervousness on the part of any one of us would have endangered the whole party and delayed us indefinitely, in the absence of that drawback we got on pretty well. We were beginning to hope that the worst was over, when Almer suddenly stopped short, and looked about him uneasily. On our asking him what was the matter, he answered vaguely that things ahead looked bad, and that he was not sure that we could pass. Croz accordingly undid the rope, as also did Almer, and the two went forward a little, telling us to remain where we were. We could *not* see what was the nature of the difficulty, but we *could* see the countenances of the men, which sufficiently showed us that the

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hitch was serious. Under any other circumstances we should have been amused at Almer's endeavours to communicate his views to Croz in an amazing mixture of pantomime, bad German, and worse French. He evidently was trying to persuade Croz of something, which Croz was not inclined to agree to, and we soon made out that the point at issue was, whether we could get over this particular place, or whether we must return to the summit, and go down the way we had come. Croz was of the latter opinion, while Almer obstinately maintained that, bad as the place was, we *could* get over it, and proceeded to perform some manœuvres, which we could not clearly see, by way of showing the correctness of his opinion. Croz, however, was unconvinced, and came back to us, declaring plainly that we should have to return. We shouted to Almer, who was still below, but he evidently had not the slightest intention of returning, and in a few moments called upon us to come on, an injunction which we cheerfully obeyed as, in our opinion, anything would be preferable to a retreat, and Croz perforce followed. A very few steps showed us the nature of the difficulty. The *arête* suddenly narrowed to a mere knife-edge of *rock*, while on one side a smooth wall, some 4000 feet in height, fell sheer towards the Glacier du Vallon, and on the other side, above the Glacier de l'Encula,

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the slope was not much less steep and equally smooth. To pass below the ridge on either side was obviously quite impossible; to walk along the ridge, which was by no means level, was equally so, and the only way of getting over the difficulty, therefore, was to straddle it, an operation which the sharpness of the ridge, putting aside all other considerations, would render the reverse of agreeable. However, there, perched in the middle of this fiendish place, sat Almer, with one leg over Glacier du Vallon and the other over the Glacier de l'Encula, calm and unmoved, as if the position was quite an everyday one. He had not got the rope on, and as he began moving along the ridge we shrieked at him to take care, to which he responded with a '*ja, gewiss!*' and a chuckle of satisfaction. We threw him the end of the rope, and then cautiously moved, one at a time, towards him. I must confess that when I found myself actually astride on this dizzy height I felt more inclined to remain there for ever, contemplating the Glacier du Vallon, on to which I might have dropped a stone, than to make my way along it. The encouraging voice of Almer, however, urged me on, and I gradually worked myself along with my hands until I was close up to him and Walker, with no damage save to the seat of my trousers. Whymper and Croz followed. From this point forwards we had for half-an-hour, without exception, the most



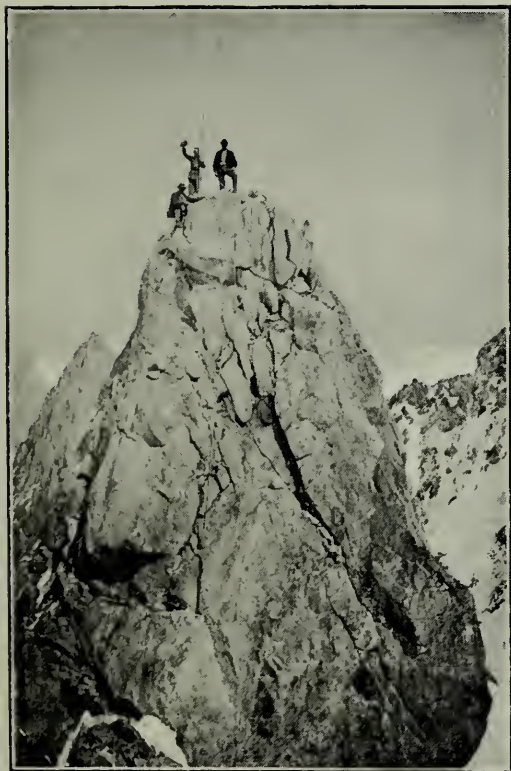
SLAB CLIMBING.

By Mr. Leonard Rawlence.



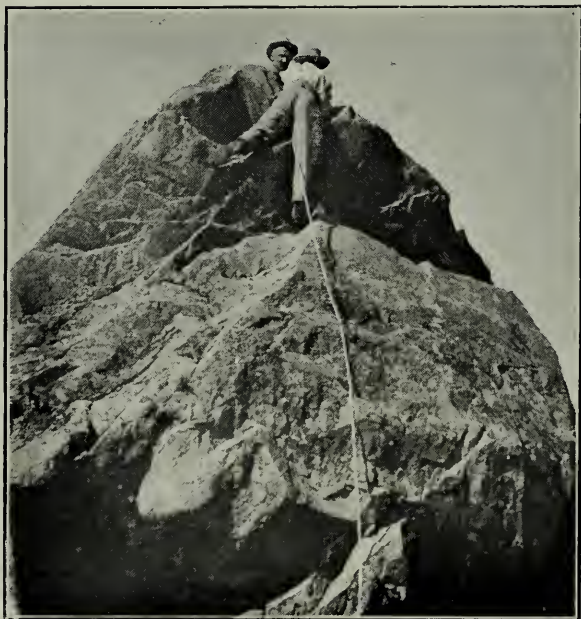
A NARROW ROCK RIDGE.

By Mr. Leonard Rawlence.



ON THE DENT DU GEANT.

By the late Mr. W. F. Donkin.



THE TOP AT LAST!

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perilous climbing, I ever did. We crept along the cliffs, sometimes on one side of the ridge, sometimes on the other, frequently passing our arms over the summit, with our feet resting on rather less than nothing. Almer led with wonderful skill and courage, and gradually brought us over the worst portion of the *arête*, below which the climbing was bad enough, but not quite such nervous work as before, and we were able to get along rather quicker. At length, at 3.45, in two hours from the top, we were not far above the well-marked gap in the ridge, between the highest peak and the one marked on the French map 3980 mètres, or 13,058 feet. There we thankfully left the *arête*, and, turning to the right, struck straight down the ice-slope towards the *bergschrund*. Almost every step had to be cut, but, in spite of all he had done, Almer's vigour seemed unimpaired, and resolutely declining Croz's offers to come to the front, he hacked away, so that we descended steadily, if slowly. We could not see the *bergschrund*, and were therefore uncertain for what exact point to steer, for we knew that at only one place would it be possible to get over it at all, where from below we had seen that the two edges nearly met—at all others the breadth and height would be far too great for a jump. For some distance we kept straight down, but after a time bore rather to the left, cutting diagonally along the slope, which was inclined at an angle of 52° , and,

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below us, curled over so rapidly, that we *could* see the glacier on to which we wished to descend, but *could not* see what lay between us and it. Passing over a patch of ice-covered rocks which projected very slightly from the general level of the slope, we were certain that we could not be far above the *schrund*, but did not quite see how we were to get down any further without knowing whether we *were* above a practicable point or not. It was suggested that one of the party should be let down with a rope, but, while we were discussing who should be the one, Almer cut a few steps more, and then, stooping down and craning over, gave a yell of exultation, and exclaimed that it was all right, and that we might jump over. By a marvellous bit of intuition, or good luck, he had led us to the only point where the two edges of the chasm so nearly met that we could get across. He cut down as low as possible, and then, from the last step, each man, in turn, sprang without difficulty on to the lower edge of the crevasse, and at 4.45 the problem of getting off the mountain was solved.

“The return from this point was uneventful.”

A few days later Mr Moore had an amusing conversation with a chance acquaintance, who made a remark that has since been often quoted. Mr Moore relates it as follows:—

“At the door of the hotel was standing a young

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Frenchman, with whom we got into conversation, observing that we had just made the ascent of the highest mountain in the country. 'Oh,' replied he, 'sans doute, le Pic de Belledonne'; a rather elevated Rigi in the neighbourhood. We informed him that our conquest was not the Pic de Belladonne, but the Pic des Ecrins, on hearing which he smiled blandly, never having heard the name before, and, evidently meditating how he might avoid showing his ignorance, finally contented himself with a spasmodic 'Ah!' After a short pause, he inquired whether we had been up Mont Blanc, and, on *my* replying in the negative, went on to say that *he* had, about ten days before. We were astonished, as, without wishing to reflect on the appearance of the worthy Gaul, I must say that he did not give us the idea of a man capable of such a performance. However, we, in our turn, smiled blandly, and inquired whether, so early in the season, he had found the ascent difficult, and whether he had had a good view from the *summit*. 'From the summit!' said he; 'I did not go to the summit.' We ventured to inquire how high his wanderings had reached. 'Mon Dieu!' replied he, 'jusqu'au Montanvert!' Our politeness was not proof against this, so we broke off the conversation abruptly, and retired to indulge our merriment unchecked."

The Ecrins is now frequently climbed. A new way up the rocky south side was discovered by a

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Frenchman, and is now usually taken for the ascent, the descent being accomplished by the north face which the party that included Mr Moore went up by and which has just been described. The route is now well known, and thus it is possible to hit off the easiest passages, but the traverse of what is known to the guides as 'the Couloir Whymper' always requires the greatest care.

CHAPTER XVI

THUNDERSTORMS IN THE ALPS

THE fatal accident caused by lightning on the Wetterhorn in 1902 has emphasized the curious fact that, except on that occasion, and once before, many years ago, when Mrs Arbuthnot was killed on the Schildthorn, no lives¹ have been lost in a thunderstorm on the Alps. This is the more remarkable when we glance through books on mountaineering, and notice how often climbers have been exposed to the full fury of summer storms, and what narrow escapes they have had. In July 1863, Mr and Mrs Spence Watson, with two friends and two guides, made an excursion from the Æggischhorn to the high glacier pass of the Jungfrauoch, an admirable account of the day's adventures having been contributed by Mr Watson to *The Alpine Journal*, from which I extract the following details.

After starting on a lovely morning, the weather changed, and when they got to the pass they encountered a severe storm of wind, snow, and hail. They quickly turned to descend, the snow falling so

¹ At the moment of going to press, I must note a fatal accident on the mountains due to lightning, namely, the death of the guide, Joseph Simond, on the Dent du Géant. This I had overlooked.

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heavily that they could not for a time see their old tracks. Suddenly a loud peal of thunder was heard, "and shortly after," writes Mr Watson, "I observed that a strange singing sound like that of a kettle was issuing from my alpenstock. We halted, and finding that all the axes and stocks emitted the same sound, stuck them into the snow. The guide from the hotel now pulled off his cap, shouting that his head burned, and his hair seemed to have a similar appearance to that which it would have presented had he been on an insulated stool under a powerful electrical machine. We all of us experienced the sensation of pricking or burning in some part of the body, more especially in the head and face, my hair also standing on end in an uncomfortable but very amusing manner. The snow gave out a hissing sound, as though a shower of hail were falling; the veil in the wide-awake of one of the party stood upright in the air; and on waving our hands, the singing sound issued loudly from the fingers. Whenever a peal of thunder was heard the phenomenon ceased, to be resumed before its echoes had died away. At these times we felt shocks, more or less violent, in those portions of the body which were most affected. By one of these shocks my right arm was paralysed so completely that I could neither use nor raise it for several minutes, nor, indeed, till it had been severely rubbed by Claret, and I suffered much pain in it at the shoulder joint



THE SECOND LARGEST GLACIER IN THE ALPS.
By Royston Le Blond.



ON A RIDGE IN THE OBERLAND,

To face p. 259.

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for some hours. At half-past twelve the clouds began to pass away, and the phenomenon finally ceased, having lasted twenty-five minutes. We saw no lightning, and were puzzled at first as to whether we should be afraid or amused. The young guide was very much alarmed, but Claret, who had twice previously heard the singing (unaccompanied by the other symptoms), laughed so heartily at the whole affair that he kept up our spirits."

The position of the party, was, however, by no means safe, yet though I have often heard the buzzing of ice-axes and rocks when in a thunderstorm on the mountains, I have never seen any ill effects from it.

A little later another description appears in *The Alpine Journal*, by Mr C. Packe, who, during the descent of a peak in the Pyrenees, was astonished to hear a curious creaking sound proceeding from behind him. He was carrying various heavy articles at the time, and imagined that the noise was due to the straining of the straps of his knapsack. He presently unslung his load, and was amazed to find a strange buzzing noise proceeding from his rifle, "as though it had been an air gun trying to discharge itself. As I held it away from me, pointed upwards," he continues, "the noise became stronger, and as I in vain sought to account for it, I thought it possible that some large insect—a bee or beetle—might have got down the barrel, and be trying to escape. I held

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the barrel downwards, with a view to shake it out ; but on lowering the gun the sound at once ceased, but was renewed as often as I raised it." It then began to occur to Mr Packe that the sound was electrical, and he felt sure this was so when he found that his alpenstock had joined in the buzzing. He therefore made a hasty retreat out of the highly charged upper regions. Several peals of thunder had previously been heard but no lightning was seen. A violent storm had, however, been experienced in a neighbouring district. That similar conditions may seem delightful to one man and entirely odious to another will strike whoever reads the following short extract from an account of a climb in the Pyrenees made by Mons. Henri Brulle. It was translated by Count Russell for *The Alpine Journal*, and runs as follows :

"Another time I crossed the Vignemale alone, *en col*, under conditions which made this expedition the pleasantest of my souvenirs. A furious storm was raging. Enveloped in the morning in a dense fog, annoyed in the steep couloirs of the Cerbillonas by vultures which swept over me like avalanches, just grazing me with their long wings, assailed during three hours by hailstones of such size that they bruised and stunned me, deafened by thunder, and so electrified that I was hissing and crepitating, I notwithstanding reached the summit at

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half-past four in the evening, amidst incessant detonations. In descending the glacier I got lost in a labyrinth of crevasses, and while balancing myself on an ice-wave I nearly dropped my ice-axe. As a climax, night came on as black as ink, and I had to grope and feel my way down the endless valley of Ossoue. It was eleven o'clock at night when I reached Gavarnie, almost starved and quite exhausted, but having lived the crowning day of my life."

Here is indeed Mark Tapley in the flesh!

Captain E. Clayton relates in *The Alpine Journal* an adventure that nearly cost him his life.

"On 17th August last I left the Hochjoch Haus with Gabriel Spechtenhauser with the intention of ascending the Weisskugel at the head of the Oetzthal. The weather for the past week had been very changeable, but when we started at 3 A.M. it was fine and starlight. A German gentleman with two guides and two others with two guides started at the same time. As long as the aid of a lantern was desirable we kept together, but as it grew light Gabriel and I gradually drew ahead. As day broke clouds began to gather, and when we halted for breakfast at 6.10 A.M. they hung so heavy on the Weisskugel that after breakfast, instead of going straight on, we diverged to the top of the rocks leading down towards Kurzras, with the intention of waiting a short time

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to see what the weather would do, and if it did not mend, of going down to Kurzras, where a friend was awaiting me.

"At these rocks we were overtaken by the single German gentleman with his guides, who had outstripped the other party. Before long the weather seemed to improve, the clouds on the Weisskugel got lighter, the sky seemed bright to the north, and we thought that very soon everything would be quite clear. The German quickly made a fresh start, but Gabriel and I waited to finish our pipes. However, we soon passed the other party, and, passing over a minor summit, where we left the rope, reached the real summit at 8.30 A.M. We had heard one or two peals of thunder on the way, but none appeared very close, and they seemed to be getting more distant. The summit was still in cloud, but it did not seem thick, and I thought it would soon blow away. But almost directly we reached the top it began to hail, and we went down a few steps on the rocky ridge that falls towards the Langtauferer Glacier, to be somewhat sheltered.

"Here I remember handing Gabriel my map to put in his pocket to keep dry, and knew nothing more till I woke to the consciousness that he was lifting me up from where I was lying on the rocks, some 20 feet, I suppose, lower than the point

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where we had been standing. I was bleeding from a cut on the head, and my right arm was very painful, and turned out afterwards to be broken. Gabriel said that he had been knocked down also, but not rendered insensible, and, falling on his hands towards the upward slope, was not hurt. He also said that he was to a certain extent conscious of there having been a sudden glare and explosion, but I knew nothing of it. The German and his two guides, who at the time were just below the first summit, but not within sight of us, were so alarmed at the lightning and thunder, that they turned at once and never stopped till they reached Kurzras. The other party, who had not got beyond the rocks where we halted during the ascent, waited there for us, and Joseph Spechtenhauser, one of their guides, came to meet us and see if we wanted assistance. However, I was quite myself when I came to, which was directly Gabriel lifted me up, and the mountain is so easy that my disabled arm was of little consequence. I did not notice any more thunder or lightning after the flash that knocked us down, and the day cleared up to a lovely one. I have every reason to be pleased with Gabriel's kindness and attention to me without regard to himself, and very much regret that my accident prevented me from carrying out any of the other

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expeditions which I had promised myself the pleasure of making in his company."

One of the most exciting accounts of an adventure in the Alps is Mr Tuckett's description of "A Race for Life,"¹ on the Eiger. Hardly less stirring is a paper in *The Alpine Journal* by the same famous climber, from which he most kindly allows me to give a long quotation, telling of a narrow escape during one of the most appalling thunderstorms that could be experienced. The party were making the ascent of the Roche Melon, a peak 11,593 feet high not far from the Mont Cenis. The weather was unsettled, and grew worse as they mounted.

"Proceeding very cautiously through the whirling wreaths of vapour lest we should suddenly drop over upon Italy and hurt it—or ourselves—we struck up the 'final incline'—as an American companion of mine once dubbed the cone of Vesuvius as we looked down upon it from its rim—and at 11.15 stood beside the ruins of the signal and enjoyed a very magnificent view of nothing in particular. As we had plenty of time at our disposal—three and a half hours sufficing for the descent to Susa—and the wind was keen and damp, our first proceeding was to search for the chapel, which we knew must be quite close to the summit of the peak; and, about 30 feet lower down, on the southern side, which was entirely free from snow, we

¹ See *True Tales of Mountain Adventure*.

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came upon a tight little wooden building, some 6 or 7 feet long and high by 5 broad, very carefully constructed, with flat bands of thin iron on the outside covering the lines of junction of the planks, so as effectually to keep out both wind and moisture. Opposite the door, which we found carefully bolted, was a wooden shelf against the wall serving as an altar, on which stood a small bronze statuette of the Virgin, whilst on either hand hung the usual curious medley of votive paintings, engravings, crosses, tapers etc., not to mention certain pious scribblings. Taking great care to disturb nothing, we arranged a loose board and our packs on the rather damp floor so as to form a seat, and waited for the clouds to disperse and disclose the superb panorama that we knew should here be visible.

“Here I may be allowed to mention that a chapel, said to have been originally excavated in the rock, and subsequently buried under ice or snow, was here dedicated to the Virgin by a crusader of Asti, Boniface by name, of the house of Rovero, in fulfilment of a vow made whilst a captive in the hands of the Saracens. More recently the present wooden structure has taken its place, and every year, on 5th August, pilgrims resort to it in considerable numbers. Lower down on the Susa side is a much more substantial structure, at a height of 9396 feet, called the Cà d’Asti, in allusion to the circumstances of

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its foundation. The last is a solidly, not to say massively, constructed circular edifice of stone and mortar, some 15 or 16 feet in diameter, and perhaps rather more in height, with a vaulted roof of solid masonry covered externally with tiles, and surmounted by an iron cross. Seen from below, it stands out boldly on a mass of crags which conceal the actual summit of the Roche Melon, and close by are some low sheds, which appear ordinarily to serve as shelter for flocks of sheep browsing on the grassy slopes around, but on the night preceding the festa of 5th August, furnish sleeping quarters for the assembled pilgrims, who attend mass in the adjoining chapel, if the weather, as frequently happens, does not permit of its being celebrated on the summit of the mountain, in what is probably the most elevated shrine in Europe.

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"The Roche Melon stands just in the track of the great storms which, brewed in the heated plains of Lombardy and Piedmont, come surging up through the valley of the Dora Riparia, and burst, hurling and crashing over the depression of Mont Cenis, to find or make a watery grave in the valley of the Arc. Of their combined fierceness and grandeur we were soon to have only too favourable an opportunity of judging, for scarcely more than five minutes after we had comfortably established

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ourselves under shelter, suddenly, without a moment's warning, a perfect *mitraille* of hail smote the roof above us, tore through the mist like grape-shot through battle-smoke, and whitened the ground like snow. We closed the door carefully, for now came flash after flash of brilliant lightning, with sharp, angry, snapping thunder, which, if we had been a quarter of an hour later, would have made our position on the exposed northern side anything but pleasant. We congratulated ourselves on our good fortune, but were glad to pitch our axes amongst the *débris* of rock above us and await patiently the hoped-for dispersal of the fog. In a few minutes the hail ceased, the mist became somewhat brighter, rifts appeared in all directions, and, issuing forth, we were amply rewarded by such glimpses of the wonderful view as, if not fully satisfactory for topographical purposes, were, in a picturesque and artistic point of view, indescribably grand and interesting. The extent of level country visible is a remarkable feature in the view from the Roche Melon, as also in that from the summit of the Pourri, where Imseng not a little amused me on first catching sight of the plains of France stretching away till lost in the haze, by shouting in a fit of uncontrollable enthusiasm, 'Ach! Das ist wunderschön! — ganz eben!' ¹

¹ "Ah! That is really wonderfully beautiful!"

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“We had not had more than time enough to seize the general features of the panorama and admire the special effects with their ever-changing and kaleidoscopic combinations, when the mist once more swooped upon us, again to be followed by hail, lightning, and thunder, and a fresh clearance. But this second visitation left behind it a further souvenir in the shape of a phenomenon with which most mountaineers are probably more or less familiar, but which I never met with to the same extent before—I allude to an electrified condition of the summit of the mountain and all objects on its surface by conduction. As the clouds swept by, every rock, every loose stone, the uprights of the rude railing outside the chapel, the ruined signal, our axes, my lorgnette and flask, and even my fingers and elbows, set up

“‘a dismal universal hiss.’

It was as though we were in a vast nest of excited snakes, or a battery of frying-pans, or listening at a short distance to the sustained note of a band of *cigali* in a chestnut wood—a mixture of comparisons which may serve sufficiently to convey the impression that the general effect was indescribable. I listened and looked and tried experiments for some time, but suddenly it burst out with an energy that suggested a coming explosion, or some equally unpleasant *dénouement*, and, dropping my axe, to



13,500 FEET ABOVE THE SEA.



ON THE FURGGEN GRAT.



A "PERSONALLY CONDUCTED" PARTY ON THE BREITHORN.



PACKING THE KNAPSACK AFTER LUNCH.

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whose performance I had been listening, I fairly bolted for the chapel.

"We had now spent a couple of hours on the summit, and had succeeded in getting, bit by bit, a sight of most of the principal features of the very remarkable view, with the exception of Monte Viso, which persistently sulked ; so at 1.15, as there seemed a probability of the weather becoming worse before it improved, we quitted our excellent shelter, and, after putting everything in order and carefully closing and bolting the door, sallied forth into the mist, which was again enshrouding the mountain, apparently as the advance guard of the fiercest storm in the neighbourhood, which we had for some time been watching as it swept solemnly towards us down the valley of the Dora.

"There is a sort of track, rather than well-defined path, down the bare, rocky, and *débris*-covered southern face of the mountain, but in the fog and momentarily increasing gloom of the coming tempest it was not always very easy to distinguish it. Still, we descended rapidly, and in less than half an hour had dropped down some 2000 feet to a point where, during an instant's lift, we descried the outline of the Cà d'Asti five minutes below us, just as the edge of the coming hail smote us with a fury which it was hard at times to face. We dashed on—it was a regular *sauve qui peut*—blinded and stagger-

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ing under the pitiless pelting and the fury of the blast, gained the door of the chapel, which faced the storm, deposited our axes outside, and darted in, thankful again to find ourselves under so good a roof just when it was most needed.

“For, if there had been at times wild goings on upon the summit during the morning, they were merely a faint prelude to the elemental strife which now raged around. The wind roared and the hail hissed in fiendish rivalry, and yet both seemed silenced when the awful crashes of thunder burst above and about us. We were in the very central track and focus of the storm, and, as we sat crouched upon the floor, the ground and the building seemed to reel beneath the roar of the detonations, and our heads almost to swim with the fierce glare of the lightning. I had carefully closed the door, not only to keep the wind and hail out, but also because lightning is apt to follow a current of air, and, to the right on entering, at about the height of a man, was a small unglazed window some 2 feet square. Opposite the door was the altar, on the step of which I seated myself. Imseng took a place by my side, between me and the window, whilst Christian perched himself on the coil of rope with his back to the wall, not far from the door, and between it and the window. A quarter of a hour may have gone by when a flash of intense vividness seemed almost to dart through

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the window, and so affected Imseng's nerves that he hastily quitted his seat by me and coiled himself up near Christian, remarking that 'that was rather too close to be pleasant.' Then came four more really awful flashes, followed all but instantaneously by sharp, crackling thunder, which sounded like a volley of bullets against a metal target, and then a fifth with a slightly increased interval between it and the report. I was just remarking to Christian that I thought the worst was past, and that we should soon be liberated, adding, 'How fortunate we are for the second time to-day to get such shelter just in the nick of time,' when—crash ! went everything, it seemed, all at once :

“ ‘ No warning of the approach of flame,
Swiftly like sudden death it came.’ ”

If some one had struck me from behind on the bump of firmness with a sledge-hammer, or if we had been in the interior of a gigantic percussion shell which an external blow had suddenly exploded, I fancy the sensation might have resembled that which I for the first instant experienced. We were blinded, deafened, smothered, and struck, all in a breath. The place seemed filled with fire, our ears rang with the report, fragments of what looked like incandescent matter rained down upon us as though a meteorite had burst, and a suffocating sulphurous odour—probably due to the sudden production of ozone in large quantities—almost choked us. For

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an instant we reeled as though stunned, but each sprang to his feet and instinctively made for the door. What my companions' ideas were I cannot tell; mine were few and simple—I had been struck, or was being struck, or both; the roof would be down upon us in another moment; inside was death, outside our only safety. The door opened inwards, and our simultaneous rush delayed our escape; but it was speedily thrown back, and, dashing out into the blinding hail, we plunged, dazed and almost stupefied, into the nearest shed. For the next few minutes the lightning continued to play about us in so awful a manner that we were in no mood calmly to investigate the nature or extent of our injuries. It was enough that we were still among the living, though I must own that, at first, I had a fearful suspicion that poor Imseng was seriously wounded. He held his head between his hands, and rolled it about in so daft a manner, and was so odd and unnatural in his movements generally, that it struck me his brain might have received some injury. I, for my part, was painfully conscious of a good deal of pain in the region of the right instep, and I saw that one of Christian's hands was bleeding, and that he was holding both his thighs as if in suffering.

“Gradually the storm drew off towards the Mont Cenis, and, with minds free from the tension of imminent peril, we had time to take stock of our

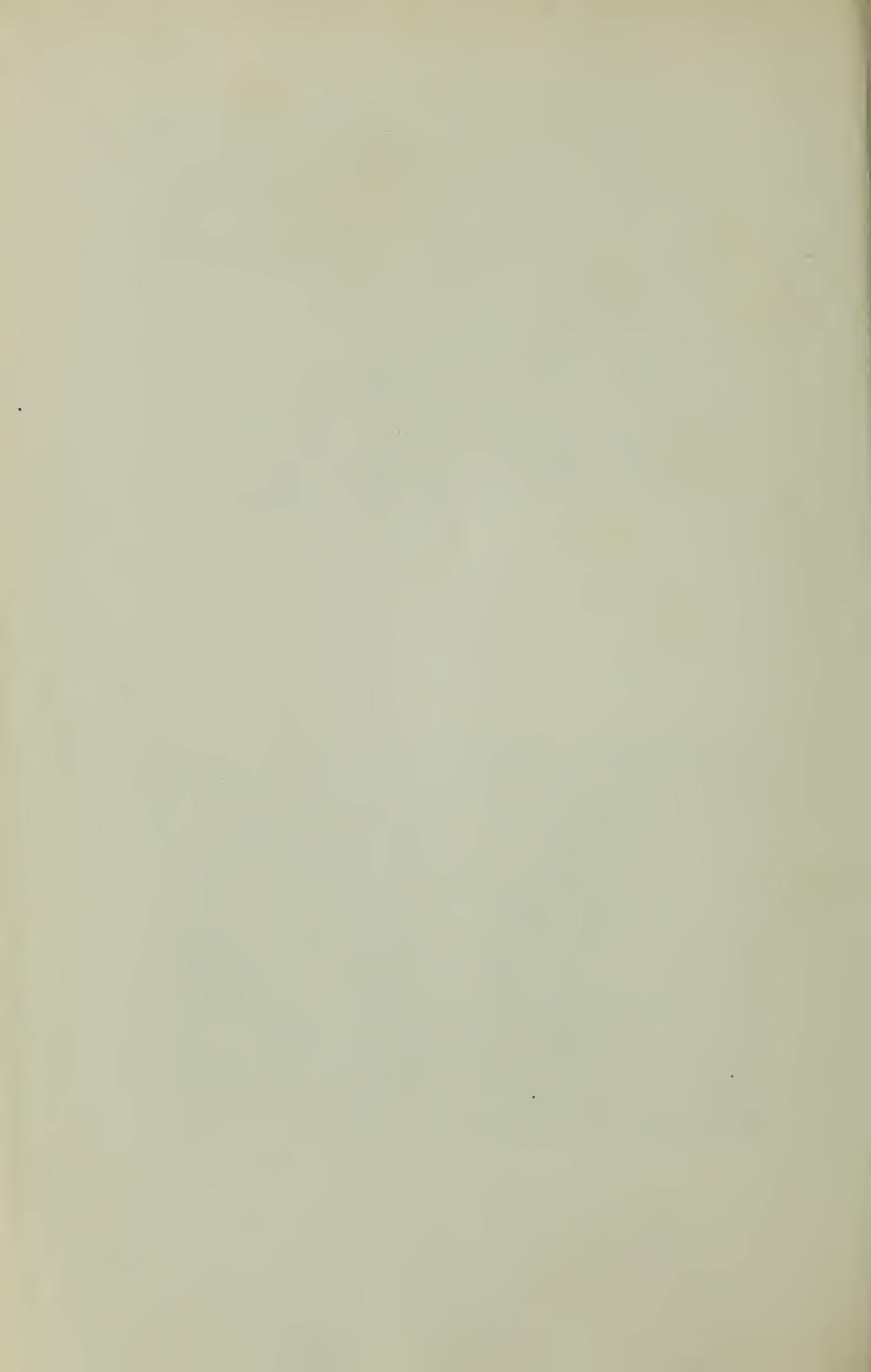


MONTE ROSA FROM THE FURGGEN GRAT.



THE MATTERHORN FROM THE WELLENKUPPE.

To face p. 272.



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condition. It was a relief to see Imseng let go his head and observe that it remained erect; to hear Christian say that his thighs were getting better; and to find, on examining my foot, that the mischief was nothing more than a flesh wound, which was bleeding but slightly. My hat, indeed, was knocked in, my pockets filled with stones and plaster, and my heart, it may be, somewhat nearer my mouth than usual, but otherwise we could congratulate ourselves, with deep thankfulness on a most marvellous escape from serious harm.

“On comparing our impressions, Imseng declared that the lightning had entered through the window, struck the altar, glanced off from it to the wall, and then vanished, whilst Christian and I agreed in the belief that the roof had been the part struck, and the flash had descended almost vertically upon us. Quitting our place of refuge and repairing to the chapel, we encountered a scene of ruin which at once confirmed the correctness of our views. The lightning had evidently first struck the iron cross outside and smashed in the roof, dashing fragments of stone and plaster upon us which, brilliantly illuminated, looked to our dazed and confused vision like flakes of fiery matter. It had then encountered the altar, overturning the iron cross and wooden candlesticks only 3 feet from the back of my head as I sat on the step, tearing the wreath of artificial flowers or worsted

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rosettes strung on copper wire which surrounded the figure of the Virgin, and scattering the fragments in all directions. Next it glanced against the wall, tore down, or otherwise damaged, some of the votive pictures (engravings), and splintered portions of their frames into 'matchwood.' The odour of ozone was still strong, the water from the melting hail was coming freely through the roof, and the walls were in two places cracked to within 5 feet of the ground. In fact, as a chapel, the building was ruined, though showing little traces, externally, of the damage done, so that it is possible—unless a stray shepherd happened to look in—that its condition would for the first time become known upon the arrival of the pilgrims on the eve of 5th August.

"We stood long watching our departing foe, and then three very sobered men dropped down silently and quickly that afternoon upon Susa, thinking of what might have been our fate."

CHAPTER XVII

LANDSLIPS IN THE MOUNTAINS

SIR W. MARTIN CONWAY has been good enough to allow me to extract from *The Alps from End to End* the following account of the destruction of Elm. Mountain falls have a special interest for all who travel in Switzerland, where the remains of so many are visible.

“The Himalayas are, from a geological point of view, a young set of mountain ranges; they still tumble about on an embarrassingly large scale. The fall, which recently made such a stir, began on 6th September 1893. That day the Maithana Hill (11,000 feet), a spur of a large mountain mass, pitched bodily rather than slid, into the valley.

“‘Little could be seen of the terrible occurrence, for clouds of dust instantly arose, which darkened the neighbourhood and fell for miles around, whitening the ground and the trees until all seemed to be snow covered. The foot of the hill had been undermined by springs until there was no longer an adequate base, and in the twinkling of an eye a large part of the

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mountain slid down, pushed forward, and shot across the valley, presenting to the little river a lofty and impervious wall, against which its waters afterwards gathered. Masses of rocks were hurled a mile away, and knocked down trees on the slopes across the valley. Many blocks of dolomitic limestone, weighing from 30 to 50 tons, were sent like cannon-shots through the air. The noise was terrific, and the frightened natives heard the din repeated at intervals for several days, for the first catastrophe was succeeded by a number of smaller slides. Even five months after the mountain gave way, every rainy day was succeeded by falls of rocks. A careful computation gives the weight of the enormous pile of rubbish at 800,000,000 tons.'

"The Himalayas are indeed passing through their dramatic geological period, when they give rise to such landslips as this at relatively frequent intervals. Plenty of landslips quite as big have been recorded in the last half-century, and, amongst the remote and uninhabited regions of the great ranges, numbers more of which no record is made constantly happen. The catastrophic period has ended for the Alps. Landslips on a great scale seldom occur there now; when they do occur, the cause of them is oftener the activity of man than of natural forces. But of a great landslide in the Alps details are sure to be observed, and we are enabled to form a picture of the occurrence.

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When the Alps tremble the nations quake; the Himalayas may shudder in their solitudes, but the busy occidental world pays scant attention, unless gathering waters threaten to spread ruin afar. Of the Gohna Lake we have been told much, but little of the fall that caused it. Eye-witnesses appear not to have been articulate. We can, however, form some idea of what it was like from the minute and accurate account we possess of a great and famous Alpine landslip. I refer to that which buried part of the village of Elm, in Canton Glarus, on 11th September 1881.¹

“Elm is the highest village in the Sernf Valley. Its position is fixed by the proximity of a meadow-flat of considerable extent. Above this three minor valleys radiate, two of which are separated from one another by a mountain mass, whose last buttress was the Plattenbergkopf, a hill with a precipitous side and a flat and wooded summit, which used to face the traveller coming up the main valley. It was this hill that fell.

“The cause of the fall was simple, and reflects little credit on Swiss communal government. About half-way up the hill there dips into it a bed of fine slate, excellent for school-slates. In the year 1868 concessions were given by the commune for working

¹ All details connected with this avalanche were collected on the spot, and shortly afterwards published in a volume, *Der Bergsturz von Elm*, by E. Buss and A. Heim. Zürich, 1881.

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this slate for ten years without any stipulation as to the method to be employed. Immense masses of the rock were removed. A hole was made 180 mètres wide, and no supports were left for the roof. It was pushed into the mountain to a depth of 65 mètres! In 1878, when the concessions lapsed, the commune, by a small majority, decided to work the quarry itself. Every burgher considered that he had a right to work in the quarry when the weather was unsuitable for farm labour. The place was therefore overcrowded on wet days, and burdened with unskilful hands. The quarry, of course, did not pay, and became a charge on the rates, but between eighty and one hundred men drew wages from it intermittently.

“The roof by degrees became visibly rotten. Lumps of rock used to fall from it, and many fatal accidents occurred. The mass of the mountain above the quarry showed a tendency to grow unstable, yet blasting went forward merrily, and no precautions were taken. Cracks opened overhead in all directions; water and earth used to ooze down through them. Fifteen hundred feet higher up, above the top of the Plattenbergkopf, the ground began to be rifted. In 1876 a large crack split the rock across above the quarry roof, and four years later the mass thus outlined fell away. In 1879 serious signs were detected of coming ruin on a large scale. A great

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crack split the mountain across behind the top of the hill. The existence of this crack was well known to the villagers, who had a special name for it. It steadily lengthened and widened. By August 1881 it was over four mètres wide, and swallowed up all the surface drainage. Every one seems then to have agreed that the mountain would ultimately fall, but no one was anxious. The last part of August and the first days of September were very wet. On 7th September masses of rock began to fall from the hill; more fell on the 8th, and strange sounds were heard in the body of the rock; work was at last suspended in the quarry. On the 10th a commission of incompetent people investigated the hill, and pronounced that there was no immediate danger. They, however, ordered that work should cease in the quarry till the following spring, whereat the workmen murmured. All through the 10th and the morning of the 11th falls of rock occurred every quarter of an hour or so. Some were large. They kept coming from new places. The mountain groaned and rumbled incessantly, and there was no longer any doubt that it was rotten through and through.

“The 11th of September was a wet Sunday. Rocks and rock-masses kept falling from the Plattenberg. The boys of the village were all agog with excitement, and could hardly be prevented by their parents

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from going too near the hill. In the afternoon a number of men gathered at an inn in the upper village, just at the foot of the labouring rocks, to watch the falls. They called to Meinrad Rhyner, as he passed, carrying a cheese from an alp, to join them, but he refused, 'not fearing for himself, but for the cheese.' Another group of persons assembled in a relative's house to celebrate a christening. A few houses immediately below the quarry were emptied, but the people from them did not move far. At four o'clock Schoolmaster Wyss was standing at his window, watch in hand, registering the falls and the time of their occurrence. Huntsman Elmer was on his doorstep looking at the quarry through a telescope. Every one was more or less on the *qui vive*, but none foresaw danger to himself.

"Many of the people in the lower village, called Müsli, which was the best part of a mile distant from the quarry, and separated from it by a large flat area, were quite uninterested. They were making coffee, milking cows, and doing the like small domestic business.

"Suddenly, at a quarter past five, a mass of the mountain broke away from the Plattenbergkopf. The ground bent and broke up, the trees upon it nodded, and folded together, and the rock engulfed them in its bosom as it crashed down over the quarry, shot across the streams, dashing their water

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in the air, and spread itself out upon the flat. A greyish-black cloud hovered for a while over the ruin, and slowly passed away. No one was killed by this fall, though the *débris* reached within a dozen yards of the inn where the sightseers were gathered. The inhabitants of the upper village now began to be a little frightened. They made preparations for moving the aged and sick persons, and some of their effects. People also came up from the lower villages to help, and to see the extent of the calamity. Others came together to talk, and the visitors who had quitted the inn returned to it. Some went into their houses to shut the windows and keep out the dust. No one was in any hurry.

“This first fall came from the east side of the Plattenbergkopf; seventeen minutes later a second and larger fall descended from the west side. The gashes made by the two united below the peak, and left its enormous mass isolated and without support. The second fall must have been of a startling character, for Schoolmaster Wyss forgot his watch after it. It overwhelmed the inn and four other houses, killed a score of persons, and drove terror into all beholders, so that they started running up the opposite hill. Oswald Kubli, one of the last to leave the inn, saw this fall from close at hand. He was standing outside the inn

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when he heard some one cry out: 'My God, here comes the whole thing down!' Every one fled, most making for the Düniberg. 'I made four or five strides, and then a stone struck Geiger and he fell without a word. Pieces from the ruined inn flew over my head. My brother Jacob was knocked down by them.' Again a dark cloud of dust enveloped the ruin. As it cleared off, Huntsman Elmer could see, through his glass, the people racing up the hill (the Düniberg) 'like a herd of terrified chamois.' When they had reached a certain height most of them stood still and looked back. Some halted to help their friends, others to take breath.

"'Of those who were before me,' relates Meinrad Rhyner, 'some were for turning back to the valley to render help, but I called to them to fly. Heinrich Elmer was carrying boxes, and was only twenty paces behind me when he was killed. There were also an old man and woman, who were helping along their brother, eighty years old; they might have been saved if they had left him. I ran by them, and urged them to hasten.'

"Of all who took refuge on the Düniberg, only six escaped destruction by the third fall, and they held on their way, and went empty-handed. Ruin overtook the kind and the covetous together.

"At this time, before the third fall, fear came

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also upon the cattle. A cow, grazing far down the valley, bellowed aloud and started running for the hillside with tail out-straightened. She reached a place of safety before her meadow was overwhelmed. Cats and chickens likewise saved themselves, and two goats sought and found salvation on the steps of the parsonage.

“During the four minutes that followed the second fall every one seems to have been running about, with a tendency, as the moments passed, to conclude that the worst was over. Then those who were watching the mountain from a distance beheld the whole upper portion of the Plattenbergkopf, 10,000,000 cubic mètres of rock, suddenly shoot from the hillside. The forest upon it bent ‘like a field of corn in the wind,’ before being swallowed up. ‘The trees became mingled together like a flock of sheep.’ The hillside was all in movement, and ‘all its parts were playing together.’ The mass slid, or rather shot down, with extraordinary velocity, till its foot reached the quarry. Then the upper part pitched forward horizontally, straight across the valley and on to the Düniberg. People in suitable positions could at this moment clearly see through beneath it to the hillside beyond. They also saw the people in the upper village, and on the Düniberg, racing about wildly. No individual masses of rock could be seen in the avalanche,

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except from near at hand ; it was a dense cloud of stone, sharply outlined below, rounded above. The falling mass looked so vast that Schoolmaster Wyss thought it was going to fill up the whole valley. A cloud of dust accompanied it, and a great wind was flung before it. This wind swept across the valley and overthrew the houses in its path 'like haycocks.' The roofs were lifted first, and carried far, then the wooden portions of the houses were borne bodily through the air, 'just as an autumn storm first drives off the leaves and then the dead branches themselves from the trees.' In many cases wooden ruins were dropped from the air on to the top of the stone *débris* when the fall was at an end. Eye-witnesses say that trees were blown about 'like matches,' that houses were 'lifted through the air like feathers,' and 'thrown like cards against the hillside,' 'that they bent, trembled, and then broke up like little toys' before the 'avalanche came to them. Hay, furniture, and the bodies of men were mixed with the house-ruins in the air. Some persons were cast down by the blast and raised again. Others were carried through the air and deposited in safe positions ; others, again, were hurled upward to destruction and dropped in a shattered state as much as a hundred mètres away. Huntsman Elmer relates as follows :

“ ‘ My son Peter was in Müsli (nearly a mile from

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the quarry) with his wife and child. He sought to escape with them by running. On coming to a wall, he took the child from his wife and leaped over. Turning round, he saw the woman reach out her hand to another child. At that moment the wind lifted him, and he was borne up the hillside. My married daughter, also in Müsli, fled with two children. She held the younger in her arms and led the other. This one was snatched away from her, but she found herself, not knowing how, some distance up the hillside, lying on the ground face downwards, with the baby beneath her, both uninjured.'

"The avalanche, as has been said, shot with incredible swiftness horizontally across the valley. It pitched on to the Düniberg, struck it obliquely, and was thus deflected down the level and fertile valley-floor, which it covered in a few seconds, to the distance of nearly a mile and over its whole width, with a mass of rock *débris* more than 30 feet thick. Most of the people on the hillside were instantly killed, the avalanche falling on to them and crushing them flat, 'as an insect is crushed into a red streak under a man's foot.' Only six persons here escaped. Two of them were almost reached by the rocks, the others were whirled aloft through the air and deposited in different directions. One survivor describes how the dust-cloud overtook him,

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‘and came between him and his breath!’ He sank face downwards on the ground, feeling powerless to go further. Looking back, he saw ‘stones flying above the dust-cloud. In a moment all seemed to be over. I stood up and climbed a few yards to a spring of water to wash out the dust, which filled my mouth and nose’ (all survivors on the Düniberg had the same experience). ‘All round was dark and buried in dust.’

“It was only when the avalanche had struck the Düniberg and began to turn aside from it—the work of a second or two—that the people in the lower village, far down along the level plain, had any suspicion that they were in danger. Twenty seconds later all was over. Some of them who were on a bridge had just time to run aside, not a hundred yards, and were saved, but most were killed where they stood. The avalanche swept away half the village. Its sharply defined edge cut one house in two. All within the edge were destroyed, all without were saved. Almost the only persons wounded were those in the bisected house. Huntsman Elmer with his telescope, and Schoolmaster Wyss with his watch, whose houses were just beyond the area of ruin, beheld the dust-cloud come rolling along, ‘like smoke from a cannon’s mouth, but black,’ filling the whole width of the flat valley to about twice the height of a

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house. The din seemed to them not very great, and the wind, which, in front of the cloud, carried the houses away like matchwood, did not reach them. Others describe the crash and thunder of the fall as terrific; it affected people differently. All agree that it swallowed up every other sound, so that shrieks of persons near at hand were inaudible. The mass seemed to slide or shoot along the ground rather than to roll. One or two men had a race for life and won it, but most failed to escape who were not already in a place of safety. Fridolin Rhyner, an eleven-year-old boy, kept his head better than any one else in the village, and succeeded in eluding the fall. He saw, too, 'how Kaspar Zentner reached the bridge as the fall took place, and how he started running as fast as he could, but was caught by the flood of rocks near Rhyner's house; he jumped aside, however, into a field, limped across it, got over the wall into the road, and so just escaped.'

"The last phase of the catastrophe is the hardest to imagine, and was the most difficult to foresee. The actual facts are these. Ten million cubic mètres of rock fell down a depth (on an average) of about 450 mètres, shot across the valley and up the opposite (Düniberg) slope to a height of 100 mètres, where they were bent 25° out of their first direction, and poured, almost like a liquid, over a horizontal

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plane, covering it, uniformly, throughout a distance of 1500 mètres and over an area of about 900,000 square mètres to a depth of from 10 to 20 mètres. The internal friction of the mass and the friction between it and the ground were insignificant forces compared with the tremendous momentum that was generated by the fall. The stuff flowed like a liquid. No wonder the parson, seeing the dust-cloud rolling down the valley, thought it was only dust that went so far. His horror, when the cloud cleared off and he beheld the solid grey carpet, beneath which one hundred and fifteen of his flock were buried with their houses and their fields, may be imagined. He turned his eyes to the hills, and lo! the familiar Plattenbergkopf had vanished and a hole was in its place.

“The roar of the fall ceased suddenly. Silence and stillness supervened. Survivors stood stunned where they were. Nothing moved. Then a great cry and wailing arose in the part of the village that was left. People began to run wildly about, some down the valley, some up. As the dust-cloud grew thinner the wall-like side of the ruin appeared. It was quite dry. All the grass and trees in the neighbourhood were white with dust. Those who beheld the catastrophe from a distance hurried down to look for their friends. Amongst them was Burkhard Rhyner, whose house was untouched

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at the edge of the *débris*. He ran to it and found, he said, 'the doors open, a fire burning in the kitchen, the table laid, and coffee hot in the coffee-pot, but no living soul was left.' All had run forth to help or see, and been overwhelmed—wife, daughter, son, son's wife, and two grandchildren. 'I am the sole survivor of my family.' Few were the wounded requiring succour; few the dead whose bodies could be recovered. Here and there lay a limb or a trunk. On the top of one of the highest *débris* mounds was a head severed from its body, but otherwise uninjured. Every dead face that was not destroyed wore a look of utmost terror. The crushed remains of a youth still guarded with fragmentary arms the body of a little child. There were horrors enough for the survivors to endure. The memory of them is fresh in their minds to the present day.

"Such was the great catastrophe of Elm. The hollow in the hills, whence the avalanche fell, can still be seen, and the pile of ruin against and below the Düniberg; but almost all the rest of the *débris*-covered area has been reclaimed and now carries fields, which were ripening to harvest when I saw them. The fallen rocks, some big as houses, have been blasted level; soil has been carried from afar and spread over the ruin. A channel, 40 feet deep or more, has been cut through it for the river, so that the structure of the rock-blanket can still

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be seen. The roots of young trees now grasp stones that took part in that appalling flight from their old bed of thousands of years to their present place of repose. The valley has its harvests again, and the villagers go about their work as their forefathers did, but they remember the day of their visitation, and to the stranger coming amongst them they tell the tragic tale with tears in their eyes and white horror upon their faces."

CHAPTER XVIII

SOME TERRIBLE EXPERIENCES

ALL must have noticed, summer after summer, in the daily papers, a recital from time to time under some such heading as, "Perils of the Alps," of a variety of disasters to Germans or Austrians on mountains the names of which are unfamiliar to English people or even to English climbers. Many young men, of little leisure and of slight means, develop a passionate love for the peaks of their native land. The minor ranges of Austria and Germany offer few difficulties to really first-class, properly equipped parties, but nasty places can be found on most of them, and the very fact that they do not boast of glaciers removes the chief argument against solitary ascents.

The Rax, near Vienna, is a mountain which can be reached in a few hours from that city, and while a good path has been laid out to the summit, many other routes requiring climbing—by climbing I mean the use of the hands—are available for the hardier class of tourists. One route in particular, that from

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the Kaiserbrunn through the Wolfsthal, appears to be really difficult, and is unfit for a man to ascend alone unless he is a climber of great skill. A terrible experience fell to the lot of a young Viennese composer, employed on the *Neue Freie Presse*, and by name Emil Habl. He set out by himself to make the expedition referred to, and, having fallen and broken his leg, he managed, thanks to his pluck and endurance, to escape with his life. "Despite injuries which made it impossible for him to stand," says a writer in one of Messrs Newnes' publications, from which I am courteously permitted to quote, "he yet succeeded in conveying himself from the scene of his accident into the valley in the neighbourhood of human dwellings. Three dreadful days and three awful nights lasted that memorable descent—a descent which can easily be made in two hours by any one able to walk. It may almost certainly be said that the case is without a parallel in the annals of Alpine accidents."

Herr Habl had ascended the Rax on previous occasions, and twice before by the Wolfsthal. It is the custom on many of the easier Austrian mountains to mark the way by painted strips on the rocks. These are sometimes very useful, but occasionally they tempt the tourist into tracks which may be beyond his powers, or lure him on till, at last, losing sight of them, he is induced to strike out a route—

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and perhaps an impracticable one—for himself. The Wolfsthal route up the Rax is marked in green, but the paint had worn off in many places, and after a time Herr Habl could no longer trace it. At last the way was barred by a precipice, but while pausing in uncertainty beneath it, the climber noticed two iron clamps fixed far apart on the face of the cliff, and argued that they must at one time have supported ladders and formed, perhaps, part of a hunter's path. He made an attempt to scramble up the rock, in spite of the absence of the ladder, but when more than 30 feet up saw that it was impossible to scale it. He therefore determined to return, but a loose stone, giving way beneath him, he was precipitated from his precarious hold, and fell with a crash straight to the bottom. This happened at about 7.30 A.M., and for a long time he lay unconscious. When he came to himself again he was suffering greatly.

"The first thing I noticed," he says, "was a terrible pain in my right leg, my head, and left side; I was also bleeding profusely from several wounds. At the same time, considering the fearful fall I had had, I felt thankful I had not been killed outright. On trying to get up I discovered, to my utter horror, that I had broken my right shin-bone. It was quite impossible to rise. The break was about 6 inches below the knee, and at the first glance I knew it to be a very bad fracture. It was what the doctors

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call an 'open' fracture—that is, the bone projected through the skin.”

It was in vain that he shouted for help. Tourists seldom pass that way, and it was useless to expect any one to hear him. To make matters worse, the weather had changed, and rain now fell heavily. But Herr Habl did not lose courage. He writes: “Unless I wanted miserably to die a long-drawn-out, hideous death from hunger and thirst, I knew *I must save myself*. I decided not to lose another moment in fruitless brooding, and waiting, and shouting, but to act at once.

“I perceived that first of all I must set my broken leg and bandage it in some rough fashion. In spite of the agony it caused me, I rolled over and over the ground in different directions like a bale of goods—a few yards here and a few yards there—until I had collected a sufficient quantity of fallen branches, bits of fir and moss; this strange collecting process took me some hours. The next thing was to tear off the sleeves of my shirt and such other parts of my underwear as I could spare. On my mountain excursions I always took with me a box containing iodoform gauze and cambric; and now these things were more than welcome.

“At last, then, I was ready to begin the operation. But, good heavens, what agony! My deadliest enemy I would not wish such excruciating pains as I suffered

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when setting the poor splintered bone—which, be it remembered, was not broken straight across. The dreadful splinters, indeed, dug deep into my flesh. Not regarding the pain (although nearly fainting therewith) I exerted my whole force, and at last succeeded in getting the bone into what, as far as I could judge, was its right position. Then I wound the iodoform gauze round it, and over that I put the cambric, the bits of underclothing, and a layer of moss. Next in the queer operation came my alpen-stock and some boughs in place of splints ; and finally I tied the whole together with the string, my hat-line, and neck-tie.”

During the rest of the day the agonising descent continued, down rocks which were difficult even for a sound man to ascend. As evening approached Herr Habl bethought him of the need of food, but, alas ! all was gone from his knapsack, doubtless left at the spot where the bandages had been put on. To regain this point was out of the question, so berries and leaves were resorted to, to appease the craving of hunger.

That night was passed in pain and weariness. The rain never ceased, the poor wounded man was soaked to the skin. The next day, from dawn to dark the fearful descent continued, and was followed by another night of indescribable misery. The morning after Herr Habl could hardly drag himself a yard,

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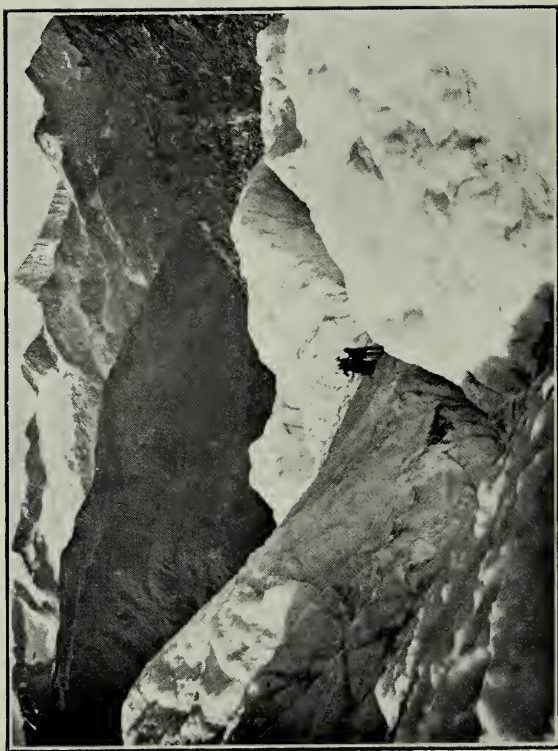
and the temptation to lie down and await the end was very great. Still, for the sake of his parents at home, he continued his efforts, though bleeding now from the contact of the sharp rocks over which he pushed himself in a half-lying, half-sitting posture. By four o'clock that afternoon it seemed as if human endurance could bear no more, and for two hours he lay in an awful apathy he could not shake off. Then, when all hope seemed over, help came, for he heard the sound of human voices, and this so stirred him that once more he began to crawl downward, though unable to obtain any reply to his cries for assistance. Another night passed, and during it, for the first time, he got some sleep. The next morning, he once more dragged his poor lacerated body downwards and at last came in sight of some houses. Calling feebly for help, he was delighted beyond measure to receive an answer, and soon he was carried to Hôtel Kaiserbrunn, and the same evening transported to the hospital at Vienna. He concludes his most interesting account by remarking: "I do not think that my accident, terrible as it is, has cured me of my love of mountaineering. But certainly the remembrance of those three terrible days and nights will deter me from again undertaking difficult climbs by myself."

An adventure, having a happier termination, befell some friends of mine in the Bregaglia group,



AIGUILLE GLACIER LAKE.

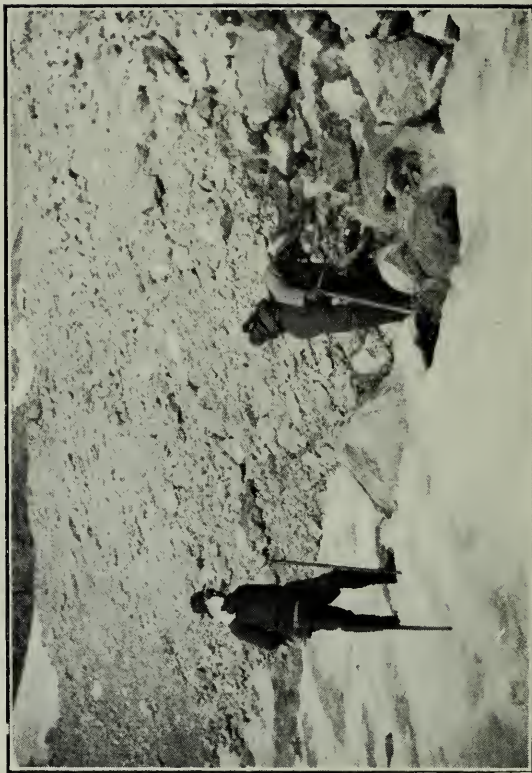
By Royston Le Blond.



AMONGST THE SERACS.



TAKING OFF THE ROPE AT THE END OF THE CLIMB.



WATER AT LAST.

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owing to the marking of a route with paint. The district was but little known to them, so they were glad to follow where the marks led. One of the party, writing in *The Alpine Journal*, says :

“The descent began by a grass ledge. After a few yards this was suddenly closed by overhanging rocks. François, who was first, appeared to us to plunge down a precipice. He answered our criticism by pointing to the red triangles. They indicated the only means of advance. It was requisite to go down a dozen feet of nearly vertical rock by the help of two grass tufts, and then for several yards to walk across a horizontal crack which gave foothold varying from 2 inches to nothing. Nominal support—help in balance—could be gained at first by digging axes into grass overhead ; further on hand-hold was obtainable. François walked across without a moment’s hesitation, but we did not despise the rope. This *mauvais pas* would not, perhaps, trouble younger cragsmen. It came upon us unprepared and when somewhat tired. But to indicate a route including such an obstacle to unsuspecting tourists as a Station Path is surely rash. A practical joke that may lead to fatal results should only be resorted to under exceptional circumstances—as, for example, in the case of an hotel bore. There can be little doubt that in this instance the Milanese section entrusted their paint-

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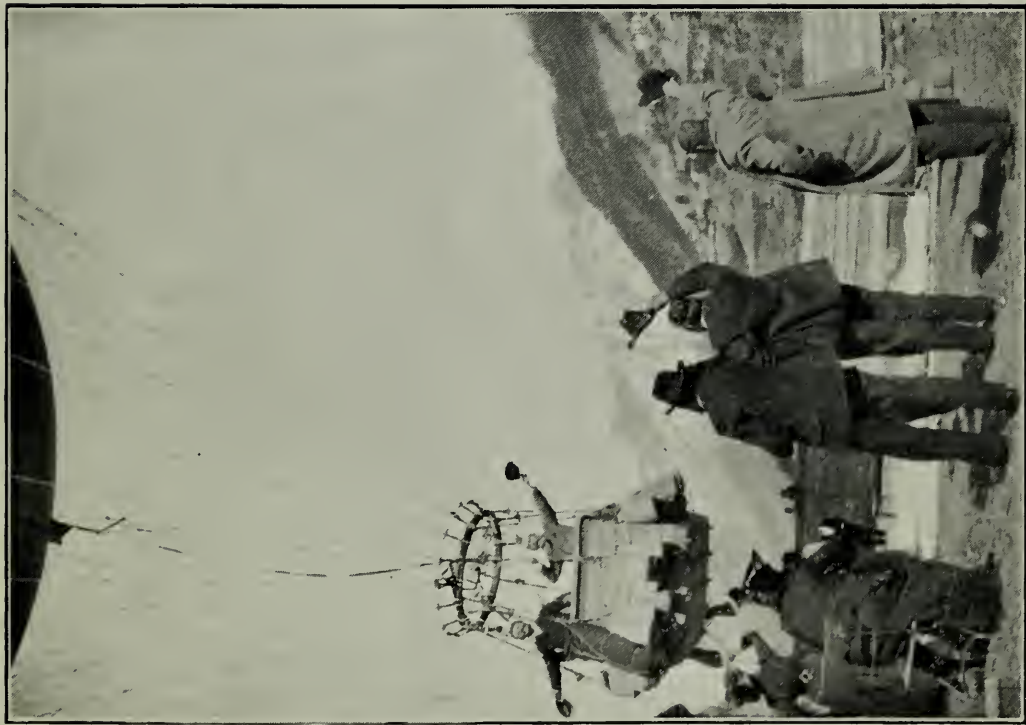
pot to a conscious, if unconscientious, humorist; for we found afterwards that he had continued his triangles through the village, along the high road, and finished up only on the ticket office."

The following terrible experience did not, it is true, happen to a party of mountaineers, but as *The Alpine Journal*, from which I take my account, has considered a notice of it appropriate to its pages, I include it amongst my tales.

"A distinguished aeronaut, Captain Charbonnet, of Lyons, married a young girl from Turin. On the evening of their wedding, in October, 1893, they set out in Captain Charbonnet's balloon 'Stella,' and covered about 10 miles on their way towards Lyons.

"Next morning, accompanied by two young Italians named Durando and Botto, one of whom had made many previous ascents with Captain Charbonnet, they started again. Stormy weather seemed to be brewing, and after rising to a height of 3000 mètres they were caught in a current. At Saluggia they nearly touched ground, then leapt up again to 4000, and presently to 6000 mètres. About 2.30 P.M. the balloon began to descend rapidly, and they had some difficulty in stopping it at 3000 mètres.

"Here they were in dense clouds, and bitterly cold; quite ignorant, moreover, of their position.



The balloon "Stella" starting from Zermatt to make the first passage of the Alps by balloon.



A moment after the balloon started.

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Captain Charbonnet made his crew lie down in the car, himself leaning out in order to try if he could catch a glimpse of any point from which he could learn his bearings. The balloon was drifting at a great rate, and nothing could be done to check it. Presently there was a shock, and Captain Charbonnet was thrown to the bottom of the car, by a heavy blow over his left eye.

"The balloon rebounded, and dashing across a gully struck the other side of it, and it finally settled down on a steep rocky spur on the east side of the Bessanese (3632 mètres=11,917 feet), just above the small glacier of Salau. It had struck the wall of the mountain which faces the Rifugio Gastaldi, at a height of about 3000 mètres (9843 feet).

"The aeronauts reached the ground a good deal shaken and bruised, but none of them, except the leader, suffering from any serious injuries. . . . Their sole provision was one bottle of wine; but they were fairly well off for covering, and they cut up the balloon to supply deficiencies. In the night a violent storm came on, to add to their misery. In spite of his injuries, Captain Charbonnet kept up the spirits of his companions as well as might be, but towards morning his powers failed, and when day dawned his young wife, a girl of eighteen, had some difficulty in bringing him round.

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"They started to descend the snow-slope, Durando going first, and making steps to the best of his power with his feet 'and with a long key which he happened to have in his pocket.' Of course they had neither nails nor poles; and, by a fatal imprudence, they did not tie themselves together, though ropes must have been in plenty in the wreck of the balloon.

"Presently Charbonnet slipped. He was held up by his wife and Botto; but a few minutes later he disappeared into a hidden crevasse. The others could see him far below, but as he neither moved nor answered their call, they rightly assumed that he was beyond the reach of any human help, and proceeded downwards.

"With infinite difficulty, owing to their utter ignorance of the country, and after another night spent in the open air, they found a path which brought them to the hut under the Rocca Venoni. Thence a shepherd guided them to the Cantina della Mussa, where they were at first taken for deserters or spies; the lady, it should be said, had been obliged to put on a suit of her husband's clothes, her own having been torn to pieces.

"The sight of her hair and bracelets convinced the inhabitants of the true state of the case; a telegram was sent to Turin, and a message to Balme, and a search party came up from the latter

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place in the afternoon. Captain Charbonnet's body was recovered the next day. It was found at the bottom of a crevasse more than 60 feet deep, and completely doubled up; but medical examination showed that his death was primarily due to the injury received when the balloon first struck."

The first passage of the Alps by balloon was made in September 1903, by Captain Spelterini, of Zürich, accompanied by Dr Hermann Seiler and another friend. They started from Zermatt, crossed the Mischabel group, passed over the valley of Saas, then rose above the Weissmies range, and approached the Lago Maggiore so closely that they were able to converse with the passengers of a steamer. They then rose again and spent the night above the mountains not far from the Gotthard. The next day it would have been possible to clear the Bernese Alps and descend somewhere near Lucerne, but though Dr Seiler, who is a climber and was fully equipped for a descent above the snow line, urged the attempt being made to cross the chain, Captain Spelterini and his friend, unused to the aspect of the higher peaks, considered it more prudent to descend, and so the expedition came to an end after twenty hours aloft, during which no discomfort from cold was experienced.

When an accident happens in the Alps involving

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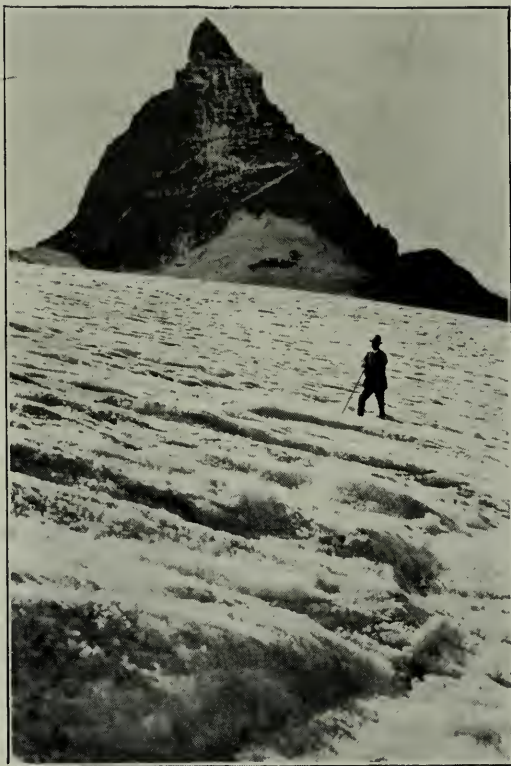
loss of life, it is not difficult to learn whatever facts may be known with regard to it, but when climbers have a narrow escape from death the occurrence is often hushed up and nothing said or written about the matter. And yet it is just the narrow escapes that furnish the most interesting Alpine narratives. Amongst them are few more exciting than a mishap on the Matterhorn which happened in 1895, and is admirably described by an onlooker, Mr Ernest Elliot Stock, in the pages of one of Messrs Newnes' periodicals, from which I am courteously permitted to quote a portion of the tale.

Mr Stock's party consisted of himself, his sister, Mr Grogan (the well-known traveller who first crossed Africa from South to North), Mr Broadbent, and the guides, P. A. and Alois Biner, Peter Perrin, and Zurmatter. An American of no climbing experience, with Joseph Biner and Felix Julen, was on the mountain at the same time, and both parties having made the ascent by the ordinary route, were coming down the same way, and had descended in safety to just below "Moseley's Platte" when the incident which so nearly cost them their lives took place. They were on a steep slope, and the American party was slightly in advance. Mr Stock writes :

"We had been working slowly, and at a slight zig-zag, down this for some 150 feet, only one member of



THE MATTERHORN FROM THE HÖRNLI RIDGE.



THE MATTERHORN FROM THE FURGG GLACIER.



JOSEPH BINER.



THE MATTERHORN HUT.

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the party moving at a time, and keeping carefully within the steps cut by the leader, when suddenly a flat stone, some 6 inches across, became detached from a small pile either to the side of or directly behind me—possibly loosened by our passage or picked up by the rope as it tautened between myself and Peter Biner, who came next. Peter's cry of warning was echoed by his brother at the tail of the party, and I half turned to see it slipping past on the right.

“ Reaching out with my axe I endeavoured to stop it, but its impetus had become too great. Getting upon its edge it rolled and struck a small rock; then jumped some 20 feet down the ice-slope, narrowly missing Perrin and ‘ America,’ and struck again upon a larger and flatter rock, when, amidst a flight of smaller stones, it bounded outwards and downwards, striking the leading guide, Joseph Biner, full and square on the head. He fell as though he had been shot, dragging ‘ America ’ after him amidst a perfect shower of snow and stones. Julen, who came third, with the greatest presence of mind drove his ice-axe hard and deep into the ice, took a turn round it with his left arm, and, though dragged violently from his steps, to our intense relief held on.

“ But we were in an awkward plight. Poor Joseph half lay, half hung, without movement, at the end of some 30 feet of rope, bleeding copiously from a deep

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gash in the head and another across the forehead caused by his fall ; ' America ' clung to a small rock projecting from the snow, beating a tattoo with his boots on the ice and wailing dismally ; Julen held the two by favour of his ice-axe and firmly planted feet only. For a space no one moved, excepting to get such anchorage as was possible upon the spur of the moment, each expecting a rope-jerk, the forerunner of a swift and battered end in the ice-fall of the Furgg Glacier thousands of feet below.

"The guides for a time seemed utterly stunned by the catastrophe, and to all suggestions could only reply with muttered prayers and exclamations. So exasperating did this become at last, with the thought of the man below bleeding to death, if not dead already, that Mr Grogan, who had vainly been endeavouring to bring the guides to a sense of the position, quietly slipped the rope, and, amid a storm of protest from them, traversed out some distance to avoid a patch of loose stones, and descended inwards again, cutting his steps as he went, till he reached a spot immediately below the wounded man. Poor Joseph hung with his head buried in a patch of snow, and in an extremely awkward position to reach from above. Mr Grogan, however, refused to be daunted by the difficulties, and we were treated to a fine piece of ice-craft during his descent."

After a little time Mr Grogan managed to cut a

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seat in the slope of ice and placing the still breathing but insensible man in it, he bandaged the wounds on his head, and before long had the satisfaction of seeing him recover his senses. With great difficulty, as he was very weak and shaken, poor Joseph was helped down the mountain, and at last every one arrived safe and sound at the lower hut.

There is no doubt that Joseph owed his life to Mr Grogan's skill, promptness, and courage. Had the travellers in the party following "America's" been of the usual type of tourist, who is hauled up and let down the Matterhorn, one dare not think what would probably have been the result, for the description Mr Stock gives of the behaviour of his guides seems in no way exaggerated. I edit this account in sight of the very spot where the accident occurred, and I have made careful enquiries here as to the accuracy of the story, and am assured that it is true in every detail. It is a pleasure to feel that a fellow-countryman should show so brilliant an example to those who were not willing and probably would have hardly been able to rescue their comrade, although to attempt such a task was one of the prior obligations of their profession.

To be bombarded by falling stones in the Alps is bad enough. To be hurled from one's foot-hold by a flock of eagles seems to me even more appalling. Though on one occasion, when on the slopes of a

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bleak and rocky peak in Lapland, in company with my husband, a pair of eagles came screaming so close to us that we drove them away by brandishing our ice-axes and throwing stones at them, I did not till recently believe that there could be positive danger to a climbing party from an onslaught by these birds. It was only a few weeks ago that taking up one of Messrs Newnes' publications I came upon an account of a tragedy in the Maritime Alps caused by an attack from eagles. On applying to the editor of the magazine in question, he kindly allowed me to make some extracts from a striking article by Mons. Antoine Neyssel. This gentleman with a friend, Mons. Joseph Monand, was making a series of ascents in the Maritime Alps with Sospello as their headquarters. From here they took a couple of guides and got all ready for a climb on the following morning, 23rd July. During the evening the amazing news reached them that a postman, while crossing a high pass, had been attacked and nearly killed by eagles. They at once went into the cottage where the poor man lay unconscious on two chairs, a pool of blood beneath him and his clothes torn to ribbons. A few days later he died from the terrible injuries he had received.

Though much shocked at the sad event, the climbers believed that their party of four would be

SOME TERRIBLE EXPERIENCES

quite safe, for each man had an ice-axe and some carried rifles. So the next morning they set out, and, ascending higher and higher, reached the glacier and put on the rope. They had forgotten all about the ferocious birds when suddenly, as they traversed the upper edge of a crevasse near the summit of their peak, the leading guide stopped with an exclamation of horror. Close to them the ground was strewn with feathers and marked with blood, doubtless the spot where the postman was attacked. They passed on, however, and remembering that they were a party of four, felt reassured. But soon after weird cries came to their ears from below, followed by the whirr and beating of great wings. Looking cautiously over the abyss, they saw a fight of eagles in progress; feathers flew in the air and strange sounds came out of the seething mass. It seemed to rise towards them, and in their insecure position on the edge of a crevasse, they were badly placed to resist an attack. The foot-hold was of frozen and slippery snow. Suddenly the eagles burst up and around them. The guides immediately cut the rope and each person did what he could to save himself. "Wherever possible," says Mons. Neyssel, "we simply raced over the frozen snow like maniacs. In another moment they dashed upon us like an avalanche. I heard a shot—I suppose Monand fired, but I did not: I do not know why.

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The attack was quite too dreadful for words. Speaking for myself, I remember that the eagles struck me with stunning force with their wings, their hooked beaks, and strong talons. Every part of my body seemed to be assailed simultaneously. It was a fierce struggle for life or death. Strangely enough, I remember nothing of what happened to my companions. I neither saw nor heard anything of them after the first great rush of the eagles. It is a miracle I was not hurled to death into the crevasse.

“Do not ask me how long this weird battle lasted. It may have been five or six minutes, or a quarter of an hour. I do not know. I grew feebler, and felt almost inclined to give up the struggle, when the blood began to trickle down my face and nearly blinded me. I knew that every moment might be my last, and that I might be hurled into the crevasse. Strangely enough, the prospect did not appal me. From this time onward I defended myself almost mechanically, inclined every moment to give up and lie down.

“I gave no thought to the guides and my poor friend Monand. If I am judged harshly for this, I regret it; but I could not help it. All at once I heard loud, excited voices, but thought that these were merely fantastic creations of my own brain. In a moment or two, however, I could distinguish a

SOME TERRIBLE EXPERIENCES

number of men laying about them fiercely with sticks, and beating off the eagles."

The villagers, having watched the ascent through a telescope had come to the rescue and had saved the lives of the writer and his two guides. His poor friend, however, was dashed into the crevasse, at the bottom of which his body was found five days later.

CHAPTER XIX

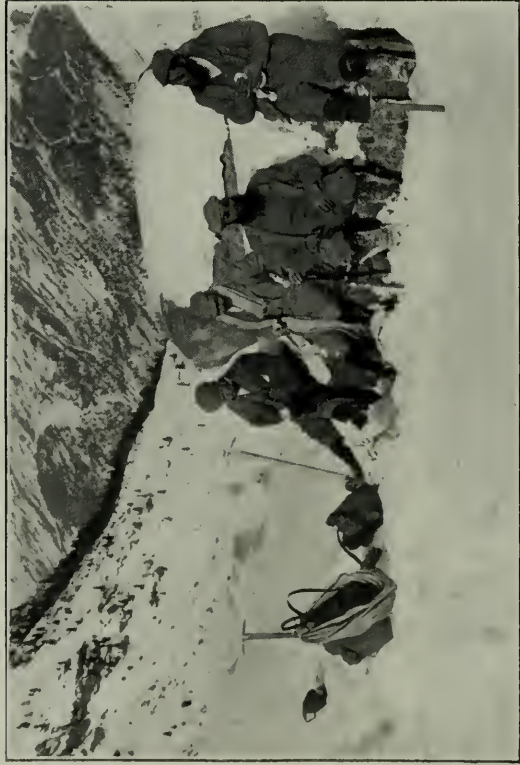
FALLING STONES AND FALLING BODIES

I AM indebted to the editor of *The Cornhill* and the author of an article entitled "The Cup and the Lip" for permission to reprint portions of a paper containing much shrewd wisdom, several accounts of narrow escapes, and withal of a wittiness and freshness that brings to the reader a keen blast of Alpine air and the memory, if by chance he be a climber, of his own early days upon the mountains.

The writer, after remarking that even in these days when the traveller, by the purchase of a few climbing requisites, is inclined to consider himself a mountaineer before he has ever set foot on a peak, goes on to say that, in reality, "for the most of us the craft is long to learn, the conquering hard. And in the experience of many there are two distinct phases. There is the time when, flushed with youth and victory, you seem to go on from strength to strength, faster from year to year, more confident in foot and hand, more scornful of the rope which you have seen so often used, not as a means of



A HOT DAY IN SUMMER ON A MOUNTAIN TOP.



LUNCHEON ON THE WAY TO THE HUT IN WINTER,
To face p. 310.



A SUMMIT NEAR SAAS.



LUNCHEON IN SUMMER ON THE TOP OF A GLACIER PASS.

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safety, but as an assistance to the progression of the weaker brethren, until one day your foot unaccountably finds the step too small, or the bit of rock comes away in your hand, or the outraged spirit of the mountains smites you suddenly with a stone, and all is changed. Henceforth every well-worn and half-despised precaution has a new meaning for you ; it becomes a point of honour to walk circumspectly, to turn the rope round every helpful projection when the leader moves, and to mark and keep your distance ; and you begin to catch a little of the wisdom of your fathers. It is not until the slip comes—as it comes to all—that you believe a slip is possible ; and were it not for slips the continual advance of cup to lip might become in time monotonous and irksome, and mountaineering nothing but a more laborious and elaborate form of walking up a damp flight of stairs. But when it has come, and there has passed away the result of the consequent shock to your self-esteem, and to other even more sensitive portions of your person, there succeeds a new pride of achievement, and you will have the advantages of the converted sinner over the ninety-and-nine just persons whose knickerbockers are still unriven. Furthermore, you will have commenced the graduate stage of your mountaineering education. Unlucky, too, will you be if your experience has not given you something

ADVENTURES ON THE ROOF OF THE WORLD

more than a juster estimate of your own moral and physical excellence ; for your misfortune, if you have chosen your companions aright, will suddenly turn your grumbling hireling into a friend as gentle and as patient as a nurse, and disclose in those who were your friends qualities of calm and steadfastness never revealed in the fret of the valley ; while, if you need wine and oil for your wounds, when you reach home again, you will find in the inn some English doctor, asking nothing better than to devote the best part of his holiday to the gratuitous healing of the stranger.

“The form of my own awakening was not such as to require wine or oil or consolation, and indeed, had I spoken of it at the time, would have scarcely escaped ridicule. We had reached the summit of our pass, and the guides and myself had decided that the steep wall of snow on the further side was an admirable place for a glissade. Accordingly, we went through the inevitable ritual of the summit, consumed as much sour bread and wine as we could, with unerring inaccuracy applied the wrong names to all the newly disclosed mountain-tops, adjusted the rope and prepared for the descent. Unfortunately, we omitted to explain the particular form of pleasure in which we were about to indulge to my companion, who was ignorant alike of mountaineering and the German tongue. The result was



A TEDIOUS SNOW SLOPE TO ASCEND.



A SITTING GLISSADE AND A QUICK DESCENT.



A GLACIER-CAPPED SUMMIT.



ITALY TO THE LEFT, SWITZERLAND TO THE RIGHT.

To face p. 312.

FALLING STONES AND FALLING BODIES

simple : the second guide, who was in front, set off with his feet together and his axe behind him ; I followed in as correct an imitation of his attitude as I could induce my body to assume ; but the novice stood still on the crest of the pass to 'await in fitting silence the event,' and the rope tightened. The jerk, after nearly cutting me in two, laid me on my back in the snow, and was then transmitted to the guide, who was also pulled off his feet and plunged head foremost down. Our combined weights drew after us both my companion and the chief guide, who was taken unawares, and both came crushing upon me. We rolled over and over, mutually pounding one another as we rolled ; hats and spectacles and axes preceded us, and huge snowballs followed in our wake, until, breathless and humiliated, we had cleared the *schrund*, and came to an ignominious halt on the flat snow below.

"This was no very rude introduction to my climbing deficiencies, but before the end of the season I had felt fear at the pit of my stomach. We (that is A. T. and myself) had scrambled up an Austrian mountain, and, on our way down, had come to where the little glacier intervenes between the precipice and the little moraine heaps above the forest. The glacier would hardly deserve the name in any other part of the Alps, so small is it ; but it makes up for what it lacks in size by its exceeding steepness ;

ADVENTURES ON THE ROOF OF THE WORLD

the hardness of its ice, and the ferocity (if one may attribute personal characteristics to Nature) of the rock walls which keep in its stream on either hand, hem it in so closely that I think it must be always in deep shadow, even in the middle of a June day.

“Here you must cross it very nearly on a level, and then skirt down its further side between ice and rock for a few feet before you come to a suitable place for the crossing of the big crevasse below you ; and then a short slide down old avalanche *débris* shoots you deliciously into the sun again. The crossing of the glacier in the steps cut by the numerous parties who have passed on previous days is an extremely simple affair. But you must not hurry, for a slip could not be checked, and would probably finish in the before-mentioned crevasse. We started, however, in some fear ; for a party ascending the mountains favoured us with continual showers of stones of all sizes, and the higher they climbed the more viciously came their artillery. Hence I was nervous and apt^{ly} to go carelessly when we reached the middle of the ice, and here the noise began. I heard a strange, whizzing, whirring noise which sounded strangely familiar, accompanied by a physical shiver on my part and a curious knocking together of the knees ; again and again it came, followed each time by a slight dull thud ; and, looking at the rocks below us on each side, I saw a

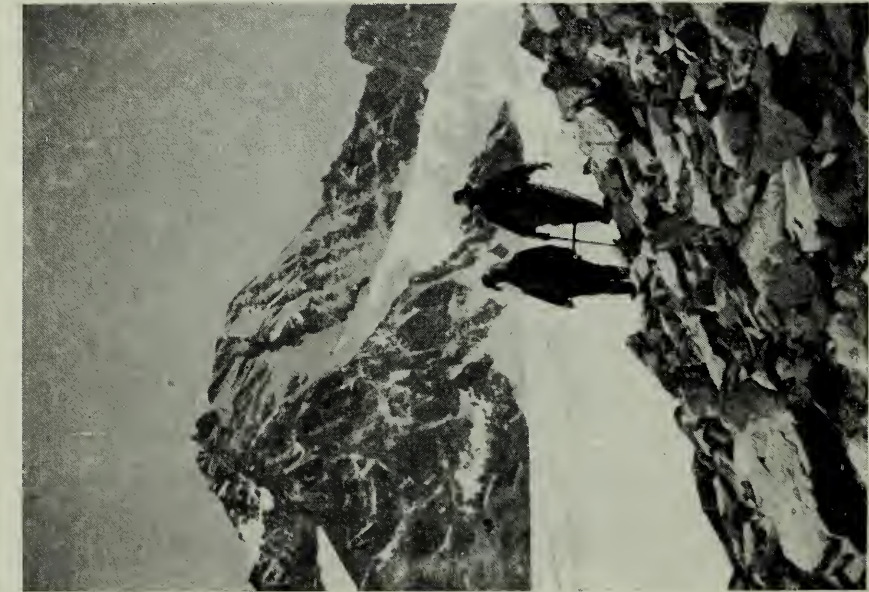
FALLING STONES AND FALLING BODIES

little white puff of dust rising at every concussion. Then I knew why the sound seemed familiar. I was reminded how, as a panting schoolboy, I had toiled up a long dusty road to a certain down with a rifle much too large for me, in the vain hope of shooting my third-class, and how, as we bruised our shoulders at the 200 yards' range, another young gentleman firing at the 400 yards at the parallel range on the left, had mistaken his mark and fired across our heads at the target beyond us on the right. Everything was present: the indescribable whirring of the bullet, its horrible invisibility while it flew, and the grey little cloud as it flattened itself on the white paint of the target. The sensation was horrible, the tendency to hurry irresistible, and but for my companion I should have risked slip and crevasse and everything to get out of the line of fire. But my companion remained absolutely steady; while he poured forth curses in every language and every *patois* ever spoken in the Italian Tyrol, he still moved his feet as deliberately, improved the steps with as much care and minuteness as if he were a Chamonix guide conducting a Frenchman on the Mer de Glace. I know he felt the position as acutely as I did, for when, a week later, we had to cross the same place under a similar fire, and the third member of the party was sent on in front with a large rope to recut the steps, he turned to me with impressive

ADVENTURES ON THE ROOF OF THE WORLD

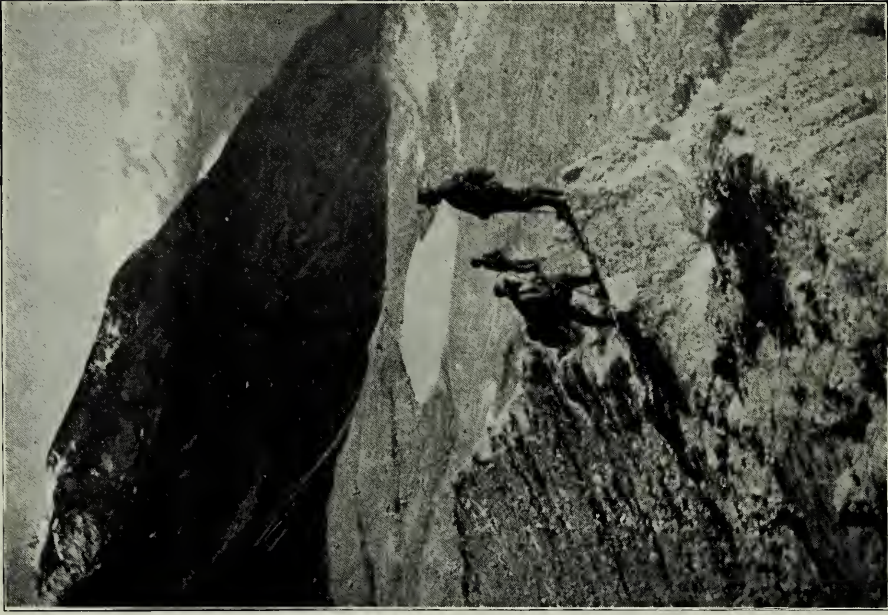
simplicity, and said, '*Adesso è quello in grande pericolo*. If he is hit, we cannot save him.' How long we took to cross I do not know. But when at last we reached the other bank we cast the rope off with one impulse, and, bending under the shelter of the rocks, ran where I had found climbing hard in the morning, jumped the *bergschrand*, fell and rolled down the snow under a final volley from the mountain, and lay long by the stream panting and safe.

"I suspect the danger here was far more apparent than real. My next adventure with a falling stone was more real than I like to think of. Four of us had been scrambling round the rocks beside the Ventina Glacier, and were returning to our camp to lunch. By bad luck, as it turned out, I reached level ground first, and, lying on my back amongst great boulders, watched with amusement the struggles of my companions who were about a hundred feet above me, apparently unable to get up or down. They were screaming to me, but the torrent drowned their voices, and I smoked my pipe in contentment. *Suave mari magno*. At last they moved, and with them the huge rock which they had been endeavouring to uphold and shouting to me to beware of. It crashed down towards me, but I determined to stop where I was. The roughness of the ground would have hindered my escape to any distance, and I calculated on stepping quickly aside when my enemy had



UNPLEASANT GOING OVER LOOSE STONES.

To face p. 317.



ON THE CREST OF AN OLD MORAINF.

FALLING STONES AND FALLING BODIES

declared himself for any particular path of attack. So I did, but the stone at that moment broke in pieces, and, quick as I was with desperation, one fragment was quicker still. It caught me, glancing as I turned between the shoulder and the elbow, only just touching me, as I suppose, for the bone was quite unhurt. Up I went into the air and down I came among the stones, with all the wind knocked out of me, large bruises all over me, not hurt, but very much frightened.

"Such experiences as this leave no very lasting impression, and might just as easily happen were the party accompanied by the best of guides. But I hardly think that any guide would have been crack-brained enough to take part in two expeditions which taught me what it feels like to slip on rock and ice respectively. The first slip took place during the winter. With one companion I was climbing in a long and not very difficult gully on a Welsh mountain. The frost had just broken, and there was more water in the pitches than was quite pleasant. It was very cold water, and my hands, which had been frost-bitten the week before, were still swathed in bandages. Hence progress was very slow, and at last my friend took the lead to spare me. He was climbing over a big overhanging stone jammed between the walls of the gully and forming an excellent spout for the water, which was thus poured

ADVENTURES ON THE ROOF OF THE WORLD

conveniently down his neck. I stood on the shelving floor of the gully in perfect safety, and watched the shower-bath, which was gradually exhausting him. He asked for his axe, and I, in a moment of madness, came near and handed it up; his legs, which were all I could then see of him, were kicking in the water about 5 feet above my head. What happened next I do not know, but I shall always maintain that, seeing an eligible blade of grass above him, he plunged the adze in and hauled with both hands. The blade resented such treatment, and came out. Anyhow he fell on my head, and we commenced a mad career down the way we had ascended, rather rolling than falling, striking our heads and backs against the rocks, and apparently destined for the stony valley upon which we had looked down between our legs for hours. People who have escaped drowning say that, in what was their struggle for life, their minds travelled back over their whole history. I know that my brain at this moment suddenly acquired an unusual strength. In a few seconds we were safe, but in those seconds there was time for centuries of regret. There was no fear; that was to come later. But I felt vividly that I was present as a spectator of my own suicide, and thought myself a feeble kind of fool. Had it been on the Dru or the Meije, I thought, it might have been worth it, but, half-drowned, to plunge a poor 40

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feet over the next pitch on a hill not 3000 feet high, with a carriage road in sight, and a girl driving in the cows for milking in Nant Francon! We did not roll far, and stuck between the walls of the gully, where they narrowed. Then I arose and shook myself, unhurt. My companion made me light his pipe, which cheered me very much, and we each partook of an enormous mutton sandwich. Help was near, for another party of three was climbing in the next gully, and came to our shouts; one ran down to the farm for a hurdle, the rest began the descent. For hours we seemed to toil, for my companion, though with admirable fortitude he supported the pain of movement, had temporarily no power over his legs and the lower part of his body. I could do little, but the others worked like blacks, and just at dark we reached the farm and the ministrations of a Welsh doctor, who told my friend, quite erroneously, that there was nothing the matter with him, pointed out a swelling on my face as big as a pigeon's egg, which, he said, would probably lead to erysipelas, and then departed into the darkness.

"A fall on ice has something in it more relentless, though, until the last catastrophe, less violent. We had all been victims to the flesh-pots of the valley, and were, perhaps, hardly fit for a long ice-slope, when we began to cut up the last few feet to gain the *arête* of our mountain. The incline seemed to

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me very steep, and, third on the rope, I was watching the leader at his labours, half pitying him for his exertions, half envying him his immunity from the ice fragments which he was sending down to me. Below me the fourth man had barely left the great flat rock on which we had breakfasted; there was no reason to think of danger; when to my horror I saw the leader cut a step, put out his foot slowly, and then very slowly and deliberately sway over and fall forwards and downwards against the ice. We were in a diagonal line, but almost immediately beneath one another, and he swung quietly round like a pendulum, his axe holding him to the slope, until he was immediately beneath the second man. Very slowly, as it seemed, the rope grew taut; the weight began to tug at his waist; and then he, too, slowly and reflectively in the most correct mountaineering attitude, as though he were embarking upon a well-considered journey, began to slide. Now was the time for me to put into practice years of patient training. I dug my toes in and stiffened my back, anchored myself to the ice, and waited for the strain. It was an unconscionable time coming, and, when it came, I still had time to think that I could bear it. Then the weight of 27 stone in a remorseless way quietly pulled me from my standpoint, as though my resistance were an impudence. Still, like the others, I held my axe against the ice

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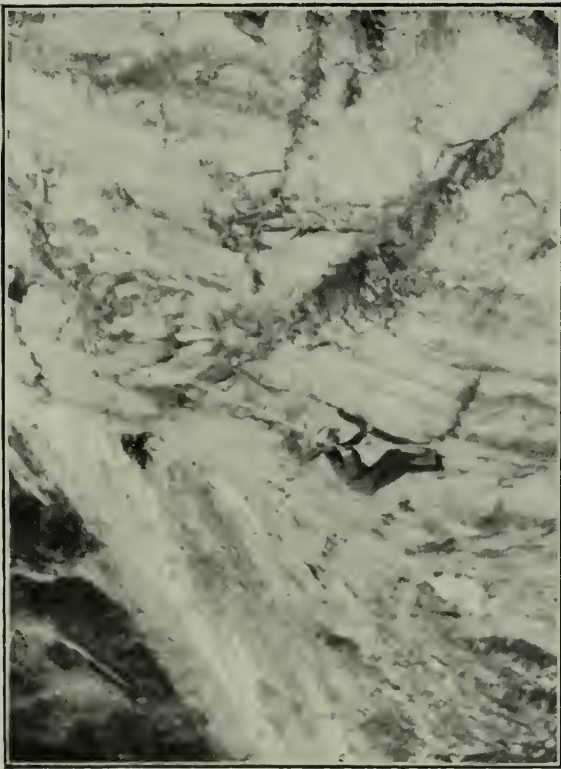
and struggled like a cat on a polished floor, always seeing the big flat rock, and thinking of the bump with which we should bound from it, and begin our real career through the air ; when suddenly the bump came and we all fell together in a heap on to the rock and the fourth man, who had stepped back upon it, my crampons running into his leg, and my axe, released from the pressure, going off through the air on the very journey which I had anticipated for us all. The others were for a fresh attack on the malicious mountain ; but I was of milder mood, and very soon, torn and wiser, we were off on a slower but more convenient path to the valley than had seemed destined for us a few minutes before. But our cup was not yet full. Having no axe with which to check a slip, I was placed at the head of the line, and led slowly down, floundering a good deal for want of my usual support. The great couloir was seamed across with a gigantic crevasse, the angle of the slope being so sharp that the upper half overhung, and we had only crossed in the morning by standing on the lower lip, cutting hand-holes in the upper, and shoving up the leader from the shoulder of the second man : hence, in descending, our position was similar to that of a man on the mantel-shelf who should wish to climb down into the fire itself. We chose the obvious alternative of a jump to the curb, which was, I suppose,

ADVENTURES ON THE ROOF OF THE WORLD

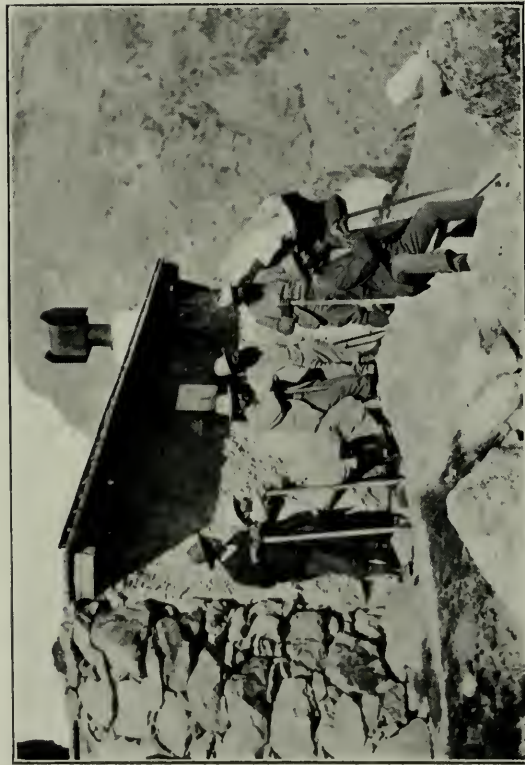
about 15 feet below us and made of steep ice with a deep and deceptive covering of snow. I jumped and slid away with this covering, to be arrested in my course by a rude jerk. I turned round indignant; but my companions were beyond my reproaches. One by one, full of snow, eloquent, and bruised, they issued slowly from the crevasse into which I had hurled them, and, heedless of the humour of the situation, gloomily urged me downwards.

"Some hours still passed before we reached our friendly Italian hut, left some days before for a raid into Swiss territory; there on the table were our provisions and shirts as we had left them, and a solemn array of bottles full of milk carried up during our absence by our shepherd friends; and there, on the pile, in stinging comment on our late proceedings, lay a slip of paper, the tribute of some Italian tourist, bearing the inscription 'Omaggio ai bravi Inglesi ignoti.' We felt very much ashamed.

"When the soup has been eaten and the pipes are lighted, and you sit down outside your hut for the last talk before bed, you will find your guides' tongues suddenly acquire a new eloquence, and, if you are a novice at the craft, will be almost overwhelmed by the catalogue of misfortune which they will repeat to you. And so, too, upon us in the winter months comes the temptation to dwell on things done long ago and ill done, and, as we write



AN AWKWARD BIT OF CLIMBING.

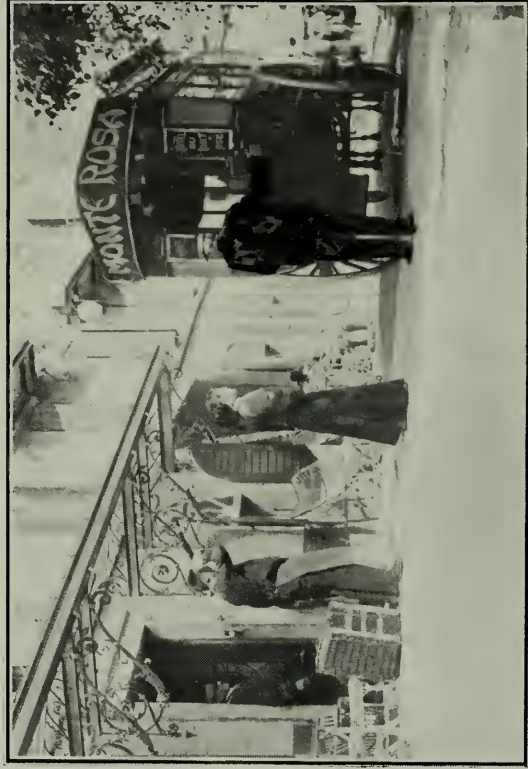


A LARGE PARTY FOR A SMALL HUT.

To face p. 322.



GUIDES AT ZERMATT.



AU REVOIR.

FALLING STONES AND FALLING BODIES

of the sport for others, we give a false impression of peril and hardihood in things that were little more than matter for a moment's laughter. I too must plead guilty to a well-meant desire to make your flesh creep.

"Mountaineering by skilled mountaineers is about as dangerous as hunting in a fair country, and requires about as much pluck as to cross from the Temple to the Law Courts at midday. Difficult mountaineering is for the unskilled about as dangerous as riding a vicious horse in a steeplechase for a man who has never learnt to ride. But the tendency in those who speak or write of it for the outer world who are not mountaineers is to conceal a deficiency of charm of style by an attempt to slog in the melodramatic, and I plead guilty at once.

"So we think and write as though to us our passion for the hills were a fancy of the summer, a mere flirtation. Yet no one has lost the first bloom of his delight in Alpine adventure before the element of sternness has come to mar his memory and bind more closely his affections. You find the mildly Horatian presence of death somewhere near you, and that at a moment when, whatever your age and strength, and whatever your infirmities, you are at the full burst of youth; when Nature has been kindest she has been most capricious, and has flaunted her relentless savagery just when she has

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bent to kiss you. The weirdest rocks rise from Italian gardens, and the forms of hill seem oldest when you are most exultant—immortal age beside immortal youth. Yet is it not this, 'the sense of tears,' in things which are not mortal which must mark your Alpine paths with memories as heavy and as definite as those inscriptions which tell of obscure and sudden death on every hillside, and invite your prayers for the woodcutter and the shepherd? You too will have seen friends go out into the morning whom you have never welcomed home. There is a danger, sometimes encountered recklessly, sometimes ignorantly, but sometimes—hard as it may be to understand the mood—not in the mere spirit of the idle youth, but met with and overcome, or overcoming, in a resolution which knows no pleasure in conquest save when the essay is fierce, and is calmly willing to pay the penalty of failure. While for ourselves we enjoy the struggle none the less because we have taken every care that we shall win, they freely give all; and for such there is surely no law. While by every precept and example we impress the old rules of the craft on our companions and our successors, how can we find words of blame for those who have at least paid the extreme forfeit, and found 'the sleep that is among the lonely hills'?

"The penalty for failure is death; not always

FALLING STONES AND FALLING BODIES

exacted at the first slip, for Nature is merciful and oftentimes doth relent; but surely waiting for those who scorn the experience of others and slight her majesty in wilfulness, in ignorance, in the obstinate following of a fancy, in the vain pursuit of notoriety. The rules are known, and those who break them, and by precept and example tempt to break them those whom they should teach, wrong the sport which they profess to love.

“In this game as in any other, it should be a point of honour for us not to make the sport more difficult for others, and not to bring unnecessary sorrow upon the peasants, who help us to play it, and upon their families. It should be a point of honour to play the game, and, if disaster comes in playing it, we have at least, done our best.”

GLOSSARY

- ALP . . . A mountain pasture, usually with chalets tenanted only in summer.
- ARÊTE . . . A ridge.
- BERGSCHRUND . . . A crevasse between the snow adhering to the rocks and the lower portion of the glacier.
- COL . . . A pass between two peaks.
- COULOIR . . . A gully, usually filled with snow or stones.
- CREVASSE . . . A crack in a glacier, caused by the movement of the ice over an uneven bed or round a corner.
- FIRN . . . The snow of the upper regions, which is slowly changing into glacier ice.
- GRAT . . . A ridge.
- JOCH . . . A pass between two peaks.
- KAMM . . . A summit ridge.
- MORaine . . . An accumulation of stones and sand which has fallen from bordering slopes on to a glacier. Medial moraines are formed by the junction of glaciers, their lateral moraines joining.

GLOSSARY

- MOULIN . . . A glacier mill, or shaft through the ice, formed by a stream which has met a crevasse in its course, and plunging into its depths has bored a hole right through the glacier and often into the rock beneath.
- NÉVÉ . . . The French of *Firn*. (See *Firn*.)
- RÜCKSACK . . The bag type of canvas knapsack now invariably used by guides and climbers.
- SCHRUND . . A crevasse. (See *Crevasse*.)
- SÉRAC . . . A cube of ice, formed by transverse crevasses, and found where a glacier passes over steep rocks. This part of a glacier is called an ice-fall.

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PRINTED AT THE EDINBURGH PRESS,
9 AND 11 YOUNG STREET

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